



thrivous.com – support@thrivous.com – +1 801 658 9661 – PO Box 4078 #73216, SLC UT 84110 USA

CERTIFICATE OF ANALYSIS AND QUALITY

Product	Tenacity Arthroprotector
SKU	TENACITY
Barcode	866033000260
Formula	2
Date	8 June 2022

Label

Warning: Consult a physician before and during use of all dietary supplements.

Use: Take 2 capsules up to 4 times daily with meals, for a total of 2 to 8 capsules daily.

Storage: Keep cool and dry, away from children.

AprèsFlex AprèsFLEX® is a registered trademark of Laila Nutraceuticals, U.S. Patent #8,551,496 and other patents pending.

* THIS STATEMENT HAS NOT BEEN EVALUATED BY THE FOOD AND DRUG ADMINISTRATION. THIS PRODUCT IS NOT INTENDED TO DIAGNOSE, TREAT, CURE, OR PREVENT ANY DISEASE.



TENACITY

ARTHROPROTECTOR

Formula 2

Supports Healthy Joint and Bone
Function for Better Aging*

Dietary Supplement
60 CAPSULES

Supplement Facts

Serving Size 2 Capsules
Servings Per Container 30

Amount Per Serving	% Daily Value
Vitamin D (D3 Cholecalciferol) 50 mcg	250%
Vitamin K (K1 Phylloquinone) 250 mcg	210%
Turmeric Rhizome Extract 500 mg (95% Curcumin)	†
S Adenosyl Methionine (SAME) 300 mg	†
Boswellia Serrata Resin Extract 100 mg (AprèsFLEX® 20% AKBA)	†
Black Pepper Extract (95% Piperine) 5 mg	†
Vitamin K2 (MK7 Menaquinone 7) 100 mcg	†

† Daily Value Not Established

Other Ingredients: Cellulose, Sodium Stearyl Fumarate
THRIVOUS, PO BOX 4078 #73216, SLC UT 84110 USA

Certifications
Letter of Guarantee
Good Manufacturing Practice (GMP) Certificate from Manufacturing
National Sanitation Foundation (NSF) Certificate from Manufacturing
ISO/IEC 17025 Certificate from Third-Party Testing
Certificate of Analysis from Third-Party Testing
Capsule Certificate of Analysis from Supplier
Capsule Certificate of Analysis from Third-Party Testing
Excipient Sodium Stearyl Fumarate Certificate of Analysis from Supplier
Excipient Sodium Stearyl Fumarate Certificate of Analysis from Third-Party Testing
Black Pepper Certificate of Analysis from Supplier
Black Pepper Certificate of Analysis from Third-Party Testing
Boswellia Serrata Certificate of Analysis from Supplier
Boswellia Serrata Certificate of Analysis from Third-Party Testing
S Adenosyl Methionine Certificate of Analysis from Supplier
S Adenosyl Methionine Certificate of Analysis from Third-Party Testing
Turmeric Curcumin Certificate of Analysis from Supplier
Turmeric Curcumin Certificate of Analysis from Third-Party Testing
Vitamin D3 Cholecalciferol Certificate of Analysis from Supplier
Vitamin D3 Cholecalciferol Certificate of Analysis from Third-Party Testing
Vitamin K1 Phylloquinone Certificate of Analysis from Supplier

Vitamin K1 Phylloquinone Certificate of Analysis from Third-Party Testing
Vitamin K2 Menaquinone 7 Certificate of Analysis from Supplier
Vitamin K2 Menaquinone 7 Certificate of Analysis from Third-Party Testing



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8 June 2022

RE: Letter of Guarantee for Thrivous Tenacity Arthroprotector

To whom it may concern,

The undersigned, Lincoln Cannon LLC DBA Thrivous (“Thrivous”), hereby guarantees as follows regarding Tenacity Arthroprotector (“Product”):

1. Product is manufactured according to current Good Manufacturing Practices as indicated in 21 CFR Part 111.
2. Product is tested by third party laboratories according to current best practices as indicated in ISO/IEC 17025.
3. All ingredients utilized for Product are lawful and safe as defined in section 402(f) of the FD&C Act.
4. To the best of Thrivous’ knowledge, concentrations of active ingredients, as stated on the label of Product, are safe for consumption.

Thrivous further guarantees that any agent signing on behalf of Thrivous has the authority to bind and obligate Thrivous.

Lincoln Cannon LLC DBA Thrivous

A handwritten signature in blue ink, appearing to read 'Lincoln Cannon', written over a horizontal line.

Lincoln Cannon
CEO at Thrivous



State of Utah
GARY R HERBERT
Governor
SPENCER J COX
Lieutenant Governor

Department of Agriculture and Food

LuAnn Adams
Commissioner
Scott Ericson
Deputy Commissioner
Travis Waller
Director, Regulatory Services

Certificate No.: REG-2019-05999

GOOD MANUFACTURING PRACTICE CERTIFICATE

We hereby certify that ORIGIN NUTRACEUTICAL, located at, 1077 S 1675 W, OREM, UT 84059 is currently under inspection as a manufacturer of health food or dietary supplements. ORIGIN NUTRACEUTICAL has all the facilities to comply with the GOOD MANUFACTURING PRACTICE for food and dietary supplements (Code of Good Manufacturing Practice for food). We also certify that ORIGIN NUTRACEUTICAL, is an inspected facility and the manufacturing plant in which their products are produced are subject to inspections at suitable intervals. Inspection evaluates and assures compliance with the Utah Wholesome Food Act and Utah Food Protection Rule, which identifies the standard for proper facility construction, good manufacturing practices for food and dietary supplements (GMP), and fulfills requirements of those applicable laws and rules in the State of Utah.

UTAH DEPARTMENT OF AGRICULTURE AND FOOD

Travis Waller

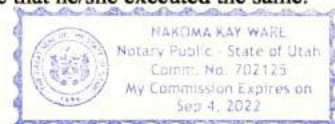
Travis Waller, Director, Division of Regulatory Services

State of Utah, County of Salt Lake.

On this date MAR 01 2019 before me, the notary, personally appeared Travis Waller, proved on the basis of satisfactory evidence to be person, whose name is subscribed to this document, and acknowledge that he/she executed the same.

Nakoma Kay Warr

Notary Public





NSF INTERNATIONAL

789 N. Dixboro Road, Ann Arbor, Michigan 48105 USA
+1 800 673 6275



GMP Registered
Dietary Supplements

NSF International has assessed and confirmed compliance of

Origin Nutraceutical, Inc.

Facility: 151 East 3450 North, Spanish Fork, UT, 84660, United States

to NSF GMP Registration Program Requirements of NSF/ANSI 173, Section 8

which includes FSMA and cGMP (21 CFR 111), (21 CFR 117)

Print Date: May 23, 2022
Certificate Number: C0570236-DS-2
Initial Certification: February 22, 2021
Expiration Date: May 23, 2023

David Trosin
Senior Director Global Certification,
Health Sciences



PERRY JOHNSON LABORATORY ACCREDITATION, INC.

Certificate of Accreditation

Perry Johnson Laboratory Accreditation, Inc. has assessed the Laboratory of:

Contract Testing Laboratories of America

151 E. 3450 N., Spanish Fork, UT 84660

*(Hereinafter called the Organization) and hereby declares that Organization is accredited
in accordance with the recognized International Standard:*

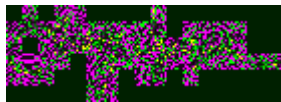
ISO/IEC 17025:2017

This accreditation demonstrates technical competence for a defined scope and the
operation of a laboratory quality management system
(as outlined by the joint ISO-ILAC-IAF Communiqué dated April 2017):

Biological Testing
(As detailed in the supplement)

Accreditation claims for such testing and/or calibration services shall only be made from addresses referenced within this certificate. This Accreditation is granted subject to the system rules governing the Accreditation referred to above, and the Organization hereby covenants with the Accreditation body's duty to observe and comply with the said rules.

For PJLA:



Tracy Szerszen
President

Perry Johnson Laboratory
Accreditation, Inc. (PJLA)
755 W. Big Beaver, Suite 1325
Troy, Michigan 48084

Initial Accreditation Date:

March 31, 2021

Issue Date:

March 31, 2021

Expiration Date:

June 30, 2023

Accreditation No.:

102267

Certificate No.:

L21-216

*The validity of this certificate is maintained through ongoing assessments based on a
continuous accreditation cycle. The validity of this certificate should be
confirmed through the PJLA website: www.pjilabs.com*



Certificate of Accreditation: Supplement

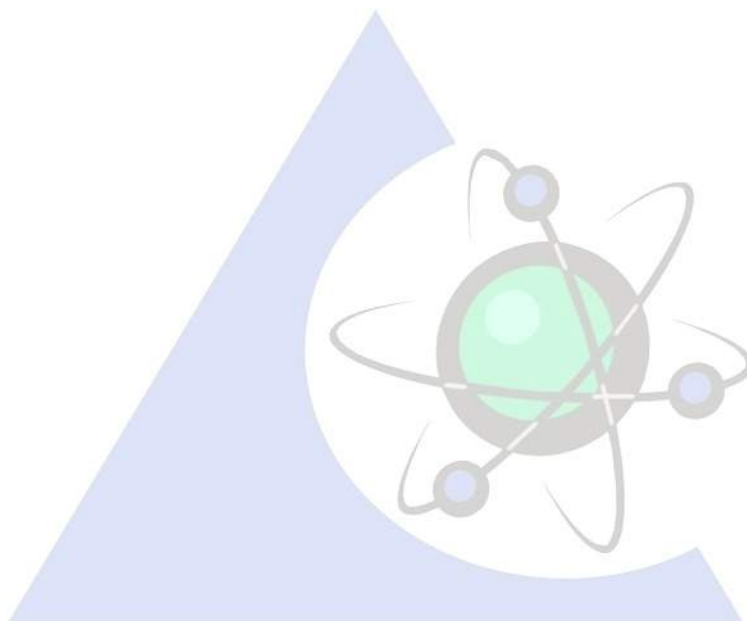
Contract Testing Laboratories of America

151 E. 3450 N., Spanish Fork, UT 84660
Contact Name: Rachael Cummings Phone: 385-477-4999

Accreditation is granted to the facility to perform the following testing:

FIELD OF TEST	ITEMS, MATERIALS OR PRODUCTS TESTED	SPECIFIC TESTS OR PROPERTIES MEASURED	SPECIFICATION, STANDARD METHOD OR TECHNIQUE USED	RANGE (WHERE APPROPRIATE) AND DETECTION LIMIT
Biological ^F	Food and Nutritional Supplements	Rapid E. Coli and Coliforms	AOAC OMA 2018.13	Petri Film Incubators Positive/Negative <100 cfu/g or <10 cfu/g To TNTC

1. The presence of a superscript F means that the laboratory performs testing of the indicated parameter at its fixed location. Example: Outside Micrometer^F would mean that the laboratory performs this testing at its fixed location.





Certificate of Analysis

CTLA ID	48736	Sample Name	30331 Tenacity Arthroprotector Formula 2
Customer	Thrivous	Lot Number	2202701
Date Received	3/15/2022	Date Complete	4/1/2022

ANALYSIS	SPECIFICATION	RESULT	METHOD	MDL	UNITS
Complete Rapid Micro					
Total Plate Count	Report	100	USP<2021>	100	cfu/g
Total Coliforms	Report	<10	BAM CH.4	10	cfu/g
<i>E. coli</i>	Report	Negative	USP<2022>		
<i>Salmonella</i>	Report	Negative	USP<2022>		
<i>S. aureus</i>	Report	Negative	USP<2022>		
Rapid Yeast & Mold	Report	<10	AOAC 2014.05	10	cfu/g
Heavy Metal					
Arsenic	Report	0.018	USP <2232>	0.001	ppm
Cadmium	Report	0.003	USP <2232>	0.001	ppm
Mercury	Report	0.001	USP <2232>	0.001	ppm
Lead	Report	0.009	USP <2232>	0.001	ppm
Vitamin D (D3 cholecalciferol)		50.000	By Input		mcg/sering
Vitamin K (K1 phyloquinone)		250.000	By Input		mcg/sering
Turmeric Rhizome Extract (95% curcumin)		500.000	By Input		mg/serving
S Adenosyl Methionine (SAmE)		300.000	By Input		mg/serving
Boswellia Serrata Resin Extract (ApresFlex® 20% AKBA)		100.000	By Input		mg/serving
Black Pepper Extract (95% piperine)		5.000	By Input		mg/serving
Vitamin K2 (MK7 menaquinone 7)		100.000	By Input		mcg/sering

COA Note:

Serving = 2 capsules

Approved By:

Date:

4/1/2022

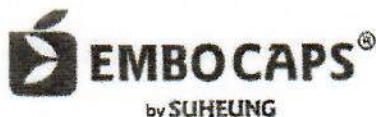


Specifications provided by the Customer. Results with an asterisk (*) denote Specification should be reviewed by the Customer. This Certificate of Analysis represents the sample submitted and does not constitute a guarantee of quality for the entire product from which it was taken. The results are provided for the benefit of the Customer. Results using the "by input" method are calculated using information provided by the Customer. MDL = Method Detection Limit

151 E 3450 N, Ste 201
Spanish Fork, UT 84660
(385) 477-4999

ISO 17025 Accreditation No: 102267

ORIGINAL



CERTIFICATE OF ANALYSIS

Issued date : Mar. 08, 2021

Product Description Empty Hard Capsule From Hypromellose (HPMC)

Customer :	SUHEUNG-AMERICA	U.S.A	Manufacturing Date :	Feb. 15, 2021
Capsule Type :	EMBO CAPS® AP "Kosher and Halal Certified"		Expiration Date :	Feb. 14, 2026
Capsule Item No. :	V0A51A51		Quantity :	7,100,000 PCS (71 Cartons)
Lot Number :	V0A51A51 - 12601		Carton No. :	1 ~ 71
Product Size :	0			
Product Code :		CAP		BODY
	Color	A51 (CLEAR)		A51 (CLEAR)

Composition

Cap	Hypromellose	qsp 100	Body	Hypromellose	qsp 100
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Analytical Results

Test Items		Unit	Standard	Results	Test Method
Length	Cap	mm	10.3 ~ 11.1	10.9	In-house Spec.
	Body	mm	18.0 ~ 18.8	18.5	In-house Spec.
Weight		mg	84.6 ~ 105.4	90.4	In-house Spec.
Identification of Hypromellose*			Positive	Positive	USP/EP
Disintegration		min/sec	More than 30 at pH1.2	Passed	USP/EP
			Not more than 20 at pH7.0	12'40"	USP/EP
Loss on Drying		%	3.0 ~ 7.0	4.6	USP/EP
Residue on Ignition (Ash)*		%	NMT 3.0	1.9	USP/EP
TAMC		CFU/g	NMT 500	<10	USP/EP
TYMC		CFU/g	NMT 100	<10	USP/EP
E.Coli			Negative/10g	Negative	USP/EP
Salmonella			Negative/10g	Negative	USP/EP
Staphylococcus aureus			Negative/10g	Negative	USP/EP
Pseudomonas aeruginosa			Negative/10g	Negative	USP/EP
Elemental Impurities**					
Arsenic		ppm	NMT 1.0	Not Detected	ICP-MS
Lead		ppm	NMT 1.0	Not Detected	ICP-MS
Cadmium		ppm	NMT 0.5	Not Detected	ICP-MS
Mercury		ppm	NMT 0.1	Not Detected	ICP-MS

* Reduced frequency testing

** Results based on continuous monitoring program

Ingredients List

Ingredients Name	E Nr	CI Nr	Function	Regulatory Reference
Hypromellose			Structure	EP, JP, USP/NF

- Storage Conditions : recommended 15~25°C and 35~65%RH

- We, Suheung Co., Ltd., hereby certify that the Empty Hard Capsules manufactured by us are free from Preservatives and no Ethylene Oxide or/and Irradiation Treatment.

* ORDER NO. H5918

Quality Assurance Manager

Suheung Co., Ltd.
 Plant : 61, Osongsuengmyeong-ro, Osong-eup, Heungdeok-gu, Cheongju-si, Chungcheongbuk-do, Korea 28161
 Office: Suheung Bldg. 40, Janghan-ro, Dongdaemun-gu, Seoul, Korea 02643
 Plant +82-43-249-4200 Office +82-2-2210-8173~8 inquiries@embocaps.com

Certificate of Analysis

Sample Information

CTLA ID: 42972
Date Received: 12/3/2021
Sample Name: 10548 CPS EMBO-AP Delayed Release Size 0 HPMC
Lot Number: 36973
Customer: Origin Nutraceutical

Analysis	Method	MDL	Specification	Result	Units
ID, Rapid Complete Micro Combo					
ID	FTIR		Report	96.6	%
Total Plate Count	USP <2021>	100	Report	400	cfu/g
Total Coliforms	BAM CH.4	10	Report	<10	cfu/g
<i>E. coli</i>	USP <2022>		Report	Negative	
<i>Salmonella</i>	USP <2022>		Report	Negative	
<i>Staphylococcus aureus</i> <2022>	USP <2022>		Report	Negative	
Rapid Yeast and Mold	AOAC 2014.05	10	Report	<10	cfu/g
FTIR Spectra	FTIR		Report	Attached	

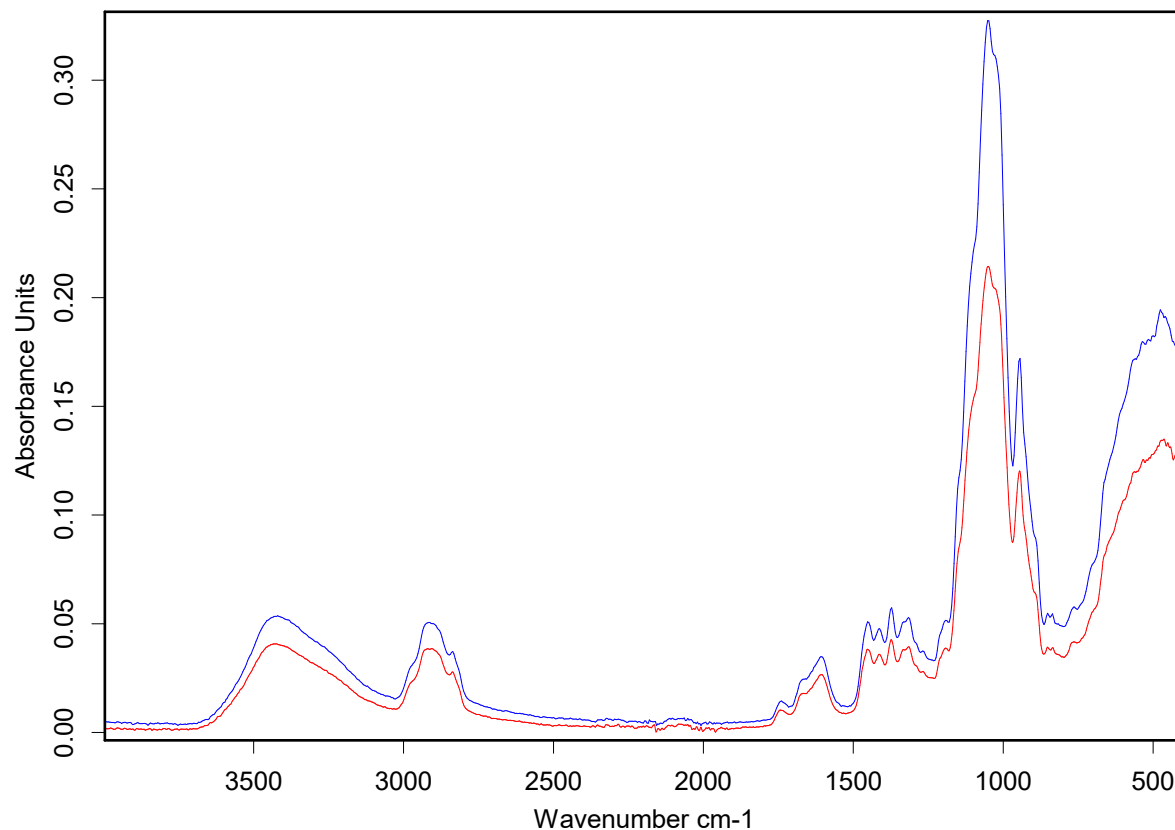
12/6/2021

DATE



Quality Manager

Specifications provided by the Customer. Results with an asterisk (*) denote Specifications should be reviewed by the Customer. This Certificate of Analysis represents data for the sample submitted and does not constitute a guarantee of quality for the entire product from which it was taken. These results are provided for the benefit of the Customer. MDL = Method Detection Limit.



Product Number	ON 10548 CPS EMBO-AP Delayed Release Siz
Entry No.	2646
Library name	ORIGIN STANDARDS LIBRARY.S01
Library description	Origin Nutraceutical
Copyright	Origin Nutraceutical Materials Only

Color	Hit Quality	Compound name	CAS Number	Molecular formula	Molecular weight
	966	ON 10548 CPS EMBO-AP Delayed Release Size 0 HPMC (39964)Standard 3			

Color	File	Path	Spectrum Type
	42972-ON 10548 Capsule 0 HPMC Early Release (36973).0	C:\Users\Israel\Documents\Bruker\OPUS_7.5.18\Data\MEAS	Query Spectrum

PRUV®
Sodium Stearyl Fumarate Ph. Eur., NF, JPE
CERTIFICATE OF ANALYSIS

Batch No.: **2882**
Re-evaluation date: **03/2024**
Manufacturing date: **03/2021**

Manufacturing Site: **Polanco, Spain**

Description	
Appearance	white or almost white, fine powder with agglomerates of flat, circular particles
Solubility	practically insoluble in water, slightly soluble in methanol, practically insoluble in acetone and in ethanol

Characteristics	Specification	Lot Result	Test Reference
Identification (1) ²⁾	Conforms	Conforms	Ph. Eur., NF, JPE
Water	NMT 5.0%	3.1 %	Ph. Eur., NF, JPE
Lead ¹⁾	NMT 0.001%	< 0.001%	USP
Heavy metals	NMT 0.002%	< 0.002%	JPE
Saponification value	142.2 - 146.0	144.1	NF, JPE
Limit of Sodium stearyl maleate ²⁾	NMT 0.25%	< 0.25 %	NF
Limit of Stearyl alcohol ²⁾	NMT 0.5%	< 0.5 %	NF
Assay	99.0 - 101.5%	100.9 %	Ph. Eur., NF, JPE
Related substances (Ph. Eur.)	Largest single impurity nmt 0.5%	0.2 %	Ph. Eur.
	Total impurities nmt 5.0%	0.5 %	Ph. Eur.
Related substances (JPE) ¹⁾	Conforms	Conforms	JPE
Identification (2)	Responds to qualitative test (1) for sodium salt	Conforms	JPE
Arsenic ¹⁾	NMT 2 ppm	< 2 ppm	JPE
Specific Surface Area	1.2 - 2.0 m ² /g	1.4 m ² /g	JRS method
Residual Solvents (GC) ³⁾	Acetone NMT 500 ppm	< 500 ppm	JRS method
	Toluene NMT 890 ppm	< 890 ppm	JRS method
Particle size distribution (Laser diffraction)	d10: max. 2.5 µm	1.5 µm	JRS method
	d50: max. 20 µm	9 µm	JRS method
	d90: max. 45 µm	23 µm	JRS method

- 1) Results reported are expected results based on historical data.
2) Additional data in attachment.
3) Conformity declaration regarding the general chapters for residual solvents (USP<467>, Ph. Eur. <5.4>): Only class 2 solvent toluene and class 3 solvent acetone are likely to be present. Residual Class 2 solvent is below the option 1 limit and residual Class 3 solvent is below 0.5 per cent. PRUV® is not routinely tested for toluene as the content complies with the exemption procedure B (Class 2 solvents used prior the last step of the synthesis) in Annex I CPMP/QWP/450/03 of the Guideline CPMP/ICH/283/95.

Zpruvp03

The batch described by this certificate meets the requirements of Ph. Eur., NF, and JPE monographs for "Sodium Stearyl Fumarate" current edition. Elements listed in ICH Q3D Guideline for elemental impurities are not used in manufacturing and not analyzed per batch; detail information is available on request.

2021-03-29
Ref: JRS Pharma LP

Stefanie Henker
Stefanie Henker
QUALITY ASSURANCE
Pharmaceutical and Food Excipients

WORLDWIDE HEADQUARTERS
JRS PHARMA GMBH & CO. KG

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ExcipientsService@JRSPharma.de · www.jrspharma.com · www.jrs.de
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USA
JRS PHARMA LP

2981 Route 22, Suite L · Patterson, NY 12563 2359 (USA)
Toll-Free: +1 (800) 431 2457
Phone: +1 (845) 878 3414 · Fax: +1 (845) 978 3484
info@jrspharma.com · www.jrspharma.com
Customer Service: +1 (845) 878 3414

Certificate of Analysis

Sample Information

CTLA ID: 42977
Date Received: 12/3/2021
Sample Name: 10530 EXC Pruv
Lot Number: 38809
Customer: Origin Nutraceutical

Analysis	Method	MDL	Specification	Result	Units
ID, Rapid Complete Micro Combo					
ID	FTIR		Report	96.0	%
Total Plate Count	USP <2021>	100	Report	100	cfu/g
Total Coliforms	BAM CH.4	10	Report	<10	cfu/g
<i>E. coli</i>	USP <2022>		Report	Negative	
<i>Salmonella</i>	USP <2022>		Report	Negative	
<i>Staphylococcus aureus</i> <2022>	USP <2022>		Report	Negative	
Rapid Yeast and Mold	AOAC 2014.05	10	Report	<10	cfu/g
FTIR Spectra	FTIR		Report	Attached	

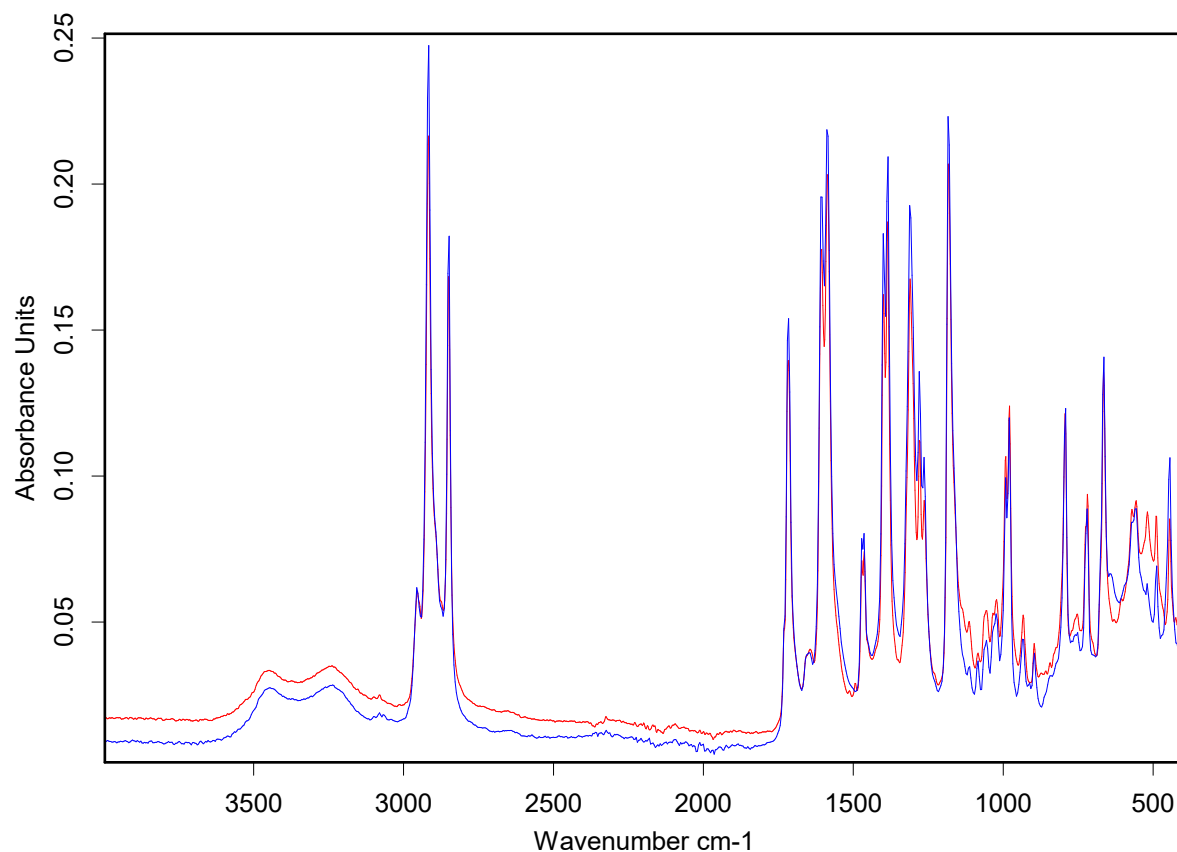
12/10/2021

DATE



Quality Manager

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Product Number	10530 PRUV 3191 Standard 1
Entry No.	730
Library name	ORIGIN STANDARDS LIBRARY.S01
Library description	Origin Nutraceutical
Copyright	Origin Nutraceutical Materials Only

Color	Hit Quality	Compound name	CAS Number	Molecular formula	Molecular weight
	933	10530 PRUV 3191 Standard 1			

Color	File	Path	Spectrum Type
	42977-ON 10530 Pruv (38809).0	C:\Users\Israel\Documents\Bruker\OPUS_7.5.18\Data\MEAS	Query Spectrum

**CEPHAM INC.**

142 Belmont Drive Unit 14, Somerset, NJ 08873
Tel: (201) 255 6011 Fax: (201) 255 6012
E-mail: info@cepham.com Web: www.cepham.com

Certificate of Analysis

Product name	Black Pepper Extract 95%	Extract Ratio	50:1
Botanical Source	<i>Piper nigrum</i>	Plant part used	Fruit (Berries)
Batch No	401K205645	Country of Origin	India
Mfg. Date	NOV 2020	Exp. Date	NOV 2022

Test	Specification	Result	Test method
Description	Light greenish yellow powder	Complies	Visual
Taste & odor	Characteristic odor and taste	Complies	Organoleptic
Identification	Positive for piperine by IR	Complies	FT-IR
Loss on drying	Not more than 2.0% w/w	0.32% w/w	USP40 <731>
Particle size	More than 95% passes through 80 mesh	Complies	USP40 <786>
Assay (HPLC)	Contains not less than 95.0% of piperine, calculated on anhydrous basis	95.09%	In-house HPLC
Heavy metals	Total - NMT 10 ppm	Complies	USP40<231>II
	Lead - NMT 2.0 ppm	Complies	ICP-MS
	Arsenic - NMT 0.5 ppm	Complies	ICP-MS
	Cadmium - NMT 0.5 ppm	Complies	ICP-MS
	Mercury - NMT 0.5 ppm	Complies	ICP-MS
Total plate count	Not more than 5,000 cfu/gm	Complies	AOAC, BAM
Yeast & molds	Not more than 1000 cfu/gm	Complies	AOAC, BAM
E. Coli	Negative in 25g	Negative	AOAC, BAM
Salmonella	Negative in 25 g	Negative	AOAC, BAM
S.aureus	Negative in 25 g	Negative	AOAC, BAM

MANAGER QA

Conclusion: The above analysis results comply with the specification. Customer is advised to verify the results before use.

Stability: The product is stable till above mentioned expiration date when stored at recommended conditions.

Recommended Storage Conditions: Store in a cool, dry place, away from direct sunlight.

Certificate of Analysis

Sample Information

CTLA ID: 33240
Date Received: 6/9/2021
Sample Name: 10383 Black Pepper Extract 95% Piperine
Lot Number: 36335
Customer: Origin Nutraceutical

Analysis	Method	MDL	Specification	Result	Units
ID, Rapid Complete Micro Combo					
ID	FTIR		Report	>95	%
Total Plate Count	USP <2021>	100	Report	<100	cfu/g
Total Coliforms	BAM CH.4	10	Report	<10	cfu/g
<i>E. coli</i>	USP <2022>		Report	Negative	
<i>Salmonella</i>	USP <2022>		Report	Negative	
<i>Staphylococcus aureus</i> <2022>	USP <2022>		Report	Negative	
Rapid Yeast and Mold	AOAC 2014.05	10	Report	<10	cfu/g
Heavy Metals					
Arsenic	USP <2232>	.001	Report	<0.001	ppm
Cadmium	USP <2232>	.001	Report	0.020	ppm
Mercury	USP <2232>	.001	Report	0.002	ppm
Lead	USP <2232>	.001	Report	<0.001	ppm

6/16/2021

DATE



Quality Manager

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Certificate of Analysis

Sample Information

CTLA ID: 42976
Date Received: 12/3/2021
Sample Name: 10383 Black Pepper Extract 95% Piperine
Lot Number: 36335
Customer: Origin Nutraceutical

Analysis	Method	MDL	Specification	Result	Units
ID, Rapid Complete Micro Combo					
ID	FTIR		Report	97.3	%
Total Plate Count	USP <2021>	100	Report	400	cfu/g
Total Coliforms	BAM CH.4	10	Report	<10	cfu/g
<i>E. coli</i>	USP <2022>		Report	Negative	
<i>Salmonella</i>	USP <2022>		Report	Negative	
<i>Staphylococcus aureus</i> <2022>	USP <2022>		Report	Negative	
Rapid Yeast and Mold	AOAC 2014.05	10	Report	<10	cfu/g
FTIR Spectra	FTIR		Report	Attached	
HPTLC	HPTLC		Report	Attached	
Piperine Bioperine	HPLC	≥95		99.514	%

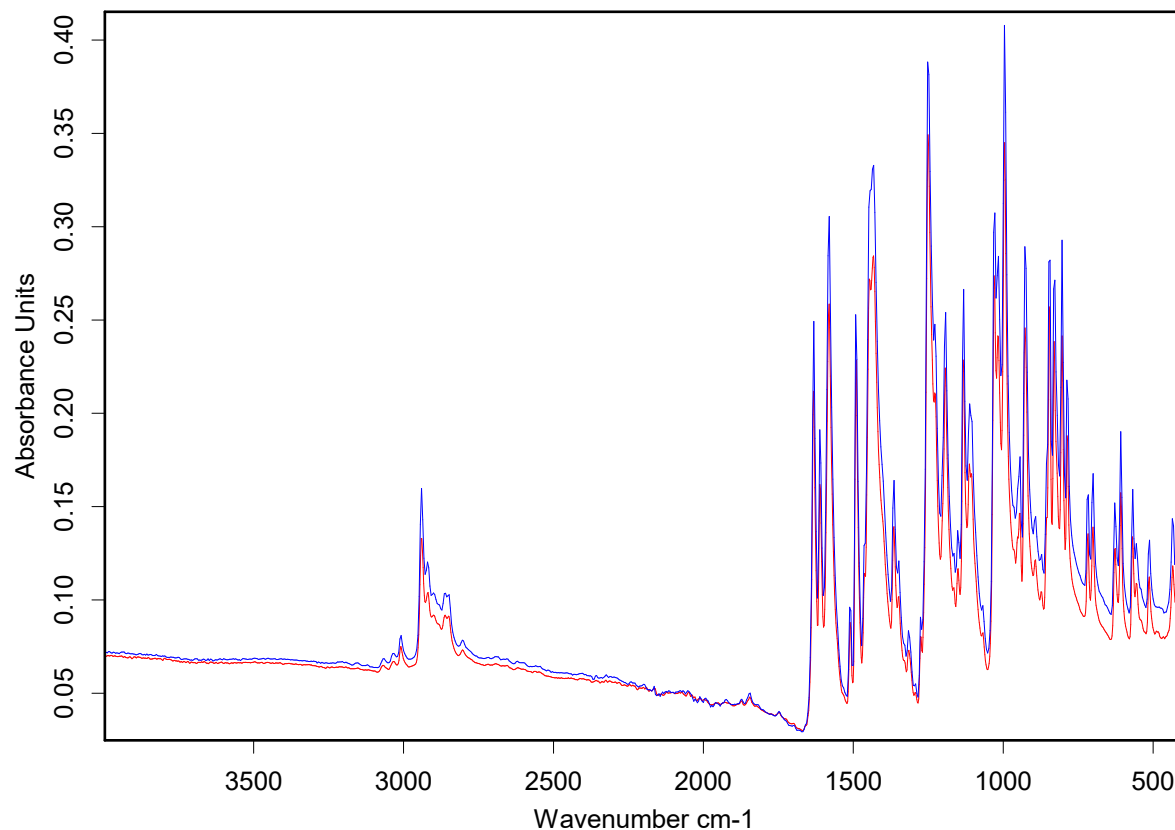
12/30/2021

DATE



Quality Manager

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Product Number	10236 Black Pepper Extract 60622 Standard 2
Entry No.	237
Library name	ORIGIN STANDARDS LIBRARY.S01
Library description	Origin Nutraceutical
Copyright	Origin Nutraceutical Materials Only

Color	Hit Quality	Compound name	CAS Number	Molecular formula	Molecular weight
	973	10236 Black Pepper Extract 60622 Standard 2			

Color	File	Path	Spectrum Type
	42976-ON 10383 Black Pepper Fruit (36335).0	C:\Users\Israel\Documents\Bruker\OPUS_7.5.18\Data\MEAS	Query Spectrum

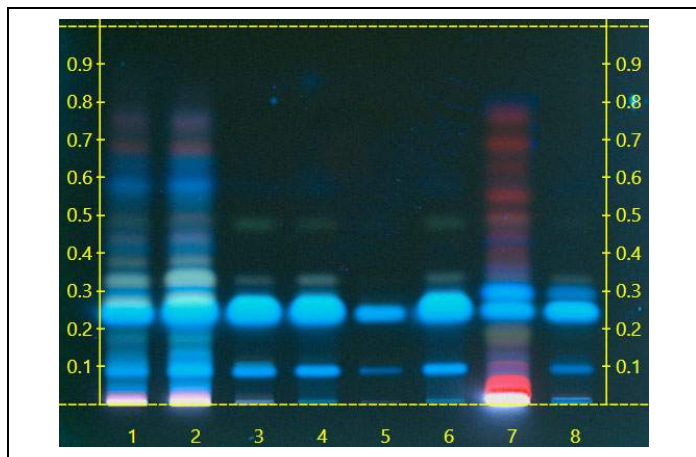
Certificate Issued To:
CTLA
151 E 3450 N
Spanish Fork, UT 84660-8507
USA



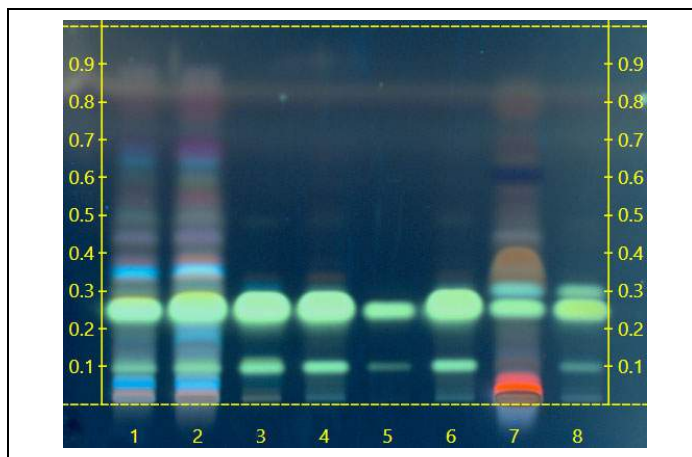
Work performed at:
Alkemist Labs
12661 Hoover Street
Garden Grove, CA 92841
714-754-HERB (4372)
714-668-9972 (FAX)
Sales@Alkemist.com
www.Alkemist.com

Certificate of Analysis: CTLA 42976 (CTLA 42976)
High Performance Thin-Layer Chromatography with Photo-Documentation

1



2



Company Name: CTLA
Title: CTLA 42976
Plant Part: seed
Sample Received: 12/20/21
Sample Packaging: Clear Whirl-Pak
Form of Botanical: powder
Appearance: Fine Beige Powder
Lot Number: (CTLA 42976) → Lane 3 (0.5µl)
Sample: 21354WNW_1
Latin Name: *Piper nigrum* L. [Piperaceae] [Black]
Reference Sample: Lane 1 (3µl) (KP33509CRB), Lane 2 (3µl) (KP33609MRH) *Piper nigrum* (fruit); Lane 7 (3µl) (JP00217AHP1) *Piper longum* (fruit); held at Alkemist Labs, Garden Grove, CA.
Analyst: A. Ung, H. Dinh, J. Mares, K. Montoya, K. Tran, N. Hoang, N. Afendikova, P. Hoang, S. Kabbaj, S. Sudberg 168281
Sample Preparation: 0.3g+3mL Methanol, sonicate/heat at 50°C for 30 min.
Stationary Phase: Silica gel 60, HPTLC plates
Mobile Phase: toluene: ethyl acetate [7/3]
Detection: (1) UV 366 nm
(2) Vanillin/Sulfuric, 110°C, 2min, 366nm (Reich, E., 2007)
Reference Standard: Lane 8 (3µl) Piperine (SHBL7917, SigAl)
Reference Source: Method Developed by Alkemist Labs
IDT-SOP-72-01

Comments & Conclusions: Lane 3 is the test sample CTLA 42976 (CTLA 42976) Lanes 1, 2, 7 are the reference samples used for comparison. This test sample, CTLA 42976 (CTLA 42976), is consistent with the chromatographic profile of the reference samples of *Piper nigrum* used above. **This test sample CTLA 42976 (CTLA 42976) has characteristics of a customized extract derived from *Piper nigrum* seed, targeting Piperine.**

NOTE: The above conclusion may be a function of the natural variance found in botanicals &/or the extraction process used to create specific extracts. The growing and drying conditions, age, seasonal variations, geographic location, extraction solvents, etc. all play a role in the phytochemical fingerprint of botanicals as well as their extracts; hence, chromatographic variations are expected.

Examined, Reviewed & Authorized by: Khanh N Tran, HPTLC, R&D Supervisor, Alkemist Labs

Report Date: 12/28/21

ISO/IEC 17025



Note: Any unidentified lanes in the above chromatograms are confidential and may represent internal studies or other test samples not related to CTLA 42976. This report applies to the sample investigated and is not necessarily indicative of the quality or condition of apparently identical or similar products. This report is for the exclusive use of the party who requested the report and not for public dissemination or use by third parties, including for promotional purposes, without the prior written permission of Alkemist Labs, Inc. This report provides technical results for a specific sample and the report shall not be altered, modified, supplemented or abstracted in any manner. Any violation of these conditions renders the report and its results void. © 2021 Alkemist Labs, Inc. All Rights Reserved

FYSOLATE TECHNOLOGIES

CERTIFICATE OF ANALYSIS

Product Name : ApresFlex	Botanical Name : <i>Boswellia serrata</i>
Customer Product code : LI/PLT/AFLAPIN	Country of origin : India
Batch No. : F20020017	Type of extract : Powdered extract
Mfg. Date : February, 2020	Extraction medium: Methyl alcohol
Exp. Date : January, 2023	Part of the plant : Gum
Date of report : July 13, 2020	-

S. NO.	TEST PARAMETERS	SPECIFICATIONS	RESULTS	METHOD CODE
1.	Description	Light brown to dark brown color dry powder	Light Brown color dry powder	LI/QC/GP/STP-22A
2.	Identification BY			
	i.HPLC	To comply	Complies	LI/QC/HL/STP-01A
	ii.HPTLC	To comply***	Complies	LI/QC/HT/STP-14A ₂ **
3.	Particle size	NLT 95% through 40 mesh	99.98%	LI/QC/GP/STP-07A
4.	Loss on drying	NMT 5%	1.34%	LI/QC/GP/STP-01A
5.	Alcohol soluble extractives	NLT 75% on d/b	98.05%	LI/QC/GP/STP-04B
6.	Heavy metals by ICP-MS**			
	a) Lead	NMT 0.5 ppm	<0.25 ppm	LI/QC/ICP/STP-03A
	b) Cadmium	NMT 0.3 ppm	<0.15 ppm	LI/QC/ICP/STP-03A
	c) Mercury	NMT 0.1 ppm	<0.05 ppm	LI/QC/ICP/STP-03A
	d) Arsenic	NMT 1.0 ppm	<0.50 ppm	LI/QC/ICP/STP-03A
7.	Residual solvents			
	a) Methyl alcohol by GC-MS	NMT 300 ppm	Not detected	LI/QC/GC/STP-01A
	b) Methyl isobutyl ketone (MIBK) by GC-MS	NMT 200 ppm	20.00 ppm	LI/QC/GC/STP-03A
	c) Acetic acid by GC-MS	NMT 200 ppm*	<200 ppm	LI/QC/GC/STP-09A**
8.	Pesticide residues	To comply as per USP <565>*	Complies	USP <561>**
9.	Aflatoxins(B ₁ , B ₂ , G ₁ & G ₂)	NMT 20 ppb*	complies	USP <561>**
10.	Assay (AKBA) by HPLC Method (3-O-Acetyl-11-Keto-β-Boswellic acid)	20-24% on d/b	22.16%	LI/QC/HL/STP-01A



FYSOLATE TECHNOLOGIES

CERTIFICATE OF ANALYSIS

Product Name: ApresFlex

Batch No. : F20020017

11.	Microbiological Parameters			
	i. Total Aerobic Microbial Count	NMT 3,000 cfu/gm	<10 cfu/gm	LI/QC/MB/STP-01B
	ii. Total Yeast & Mold Count	NMT 100 cfu/gm	<10 cfu/gm	LI/QC/MB/STP-02B
	iii. E. Coli	Should be absent/10gm	Absent	LI/QC/MB/STP-03B
	iv. Salmonella	Should be absent/10gm	Absent	LI/QC/MB/STP-05B
	v. Staphylococcus aureus	Should be absent/10gm	Absent	LI/QC/MB/STP-07B
	vi. Pseudomonas aeruginosa	Should be absent/10gm	Absent	LI/QC/MB/STP-09B
	vii. Total Coliforms	Negative/10gm	Negative	LI/QC/MB/STP-10B


Remarks: The above material complies to the prescribed standards.

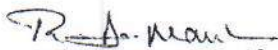
Storage Conditions: store in tightly closed containers free of excessive heat, moisture, light and air.


Packaging Details: 10Kg packed in 25Lts HDPE drum with 24x36x350G double lined LDPE poly bags.

Note:

- * Results are based on Historical Data, testing every 20th lot.
- ** Testing is carried out on contract testing Laboratory.
- *** Testing will be done once in a year on skip lot basis.
- "The Herbal extracts supplied by Fysolate Technologies are bulk dietary ingredients intended for further processing only and are not finished Dietary Supplement products in the form being sold."

m.v. 
PREPARED BY
13/07/2020


REVIEWED BY
13/07/2020

S. 
APPROVED BY
13/07/2020

2 of 2

Certificate of Analysis

Sample Information

CTLA ID: 42975
Date Received: 12/3/2021
Sample Name: 10624 Boswellia Serrata Resin Extract
Lot Number: 29560
Customer: Origin Nutraceutical

Analysis	Method	MDL Specification	Result	Units
ID, Rapid Complete Micro Combo				
ID	FTIR	Report	99.0	%
Total Plate Count	USP <2021>	100 Report	<100	cfu/g
Total Coliforms	USP <2021>	10 Report	<10	cfu/g
<i>E. coli</i>	USP <2022>	Report	Negative	
<i>Salmonella</i>	USP <2022>	Report	Negative	
<i>Staphylococcus aureus</i> <2022>	USP <2022>	Report	Negative	
Rapid Yeast and Mold	AOAC 2014.05	10 Report	<10	cfu/g
FTIR Spectra	FTIR	Report	Attached	
HPTLC	HPTLC	Report	Attached	
Boswellic Acid	HPLC	≥20	25.05	%

Amended report: test correction

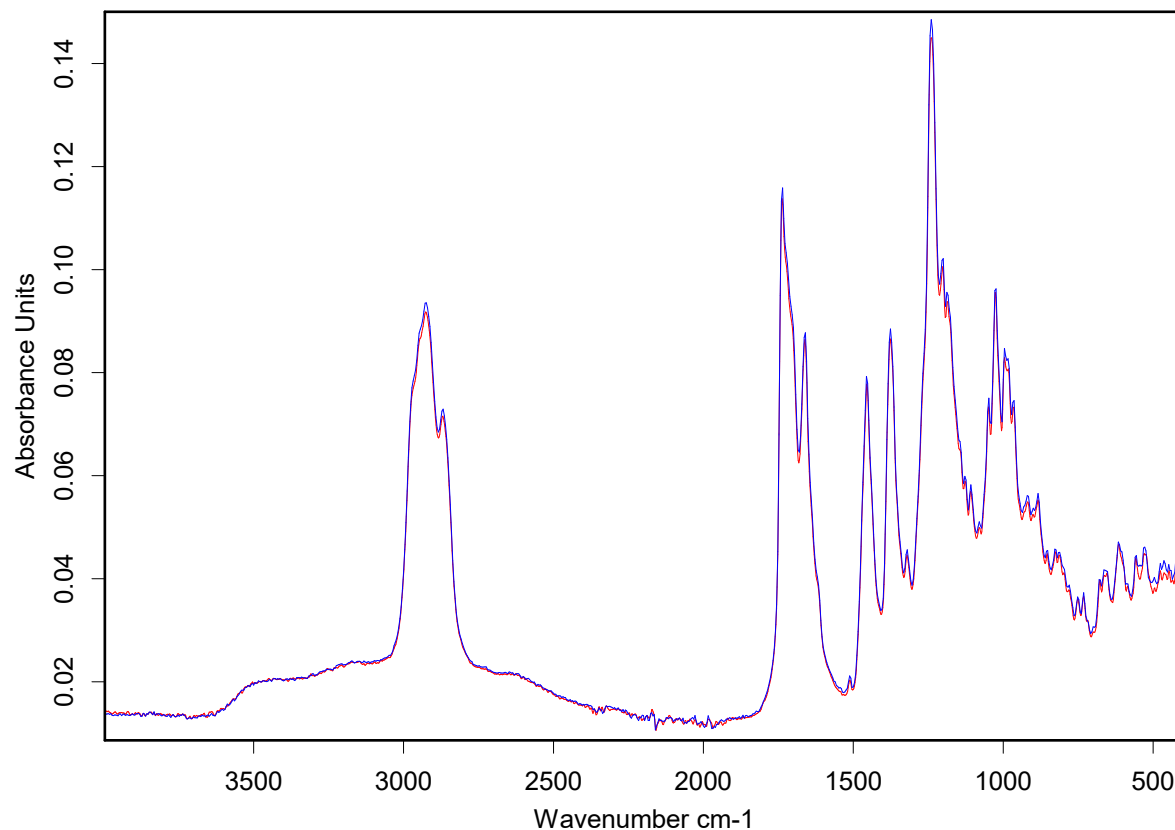
12/29/2021

DATE



Quality Manager

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Product Number	ON 10524 Boswellia Serrata Resin (29560)Star
Entry No.	2645
Library name	ORIGIN STANDARDS LIBRARY.S01
Library description	Origin Nutraceutical
Copyright	Origin Nutraceutical Materials Only

Color	Hit Quality	Compound name	CAS Number	Molecular formula	Molecular weight
	990	ON 10524 Boswellia Serrata Resin (29560)Standard 1			

Color	File	Path	Spectrum Type
	42975-ON 10524 Boswellia Serrata Resin (29560).0	C:\Users\Israel\Documents\Bruker\OPUS_7.5.18\Data\MEAS	Query Spectrum

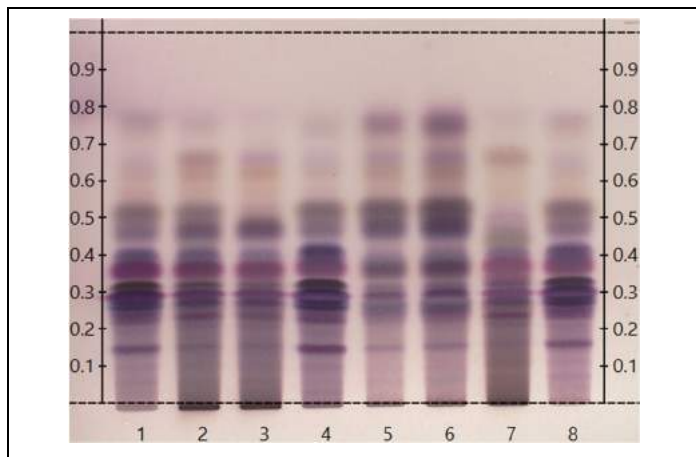
Certificate Issued To:
CTLA
151 E 3450 N
Spanish Fork, UT 84660-8507
USA



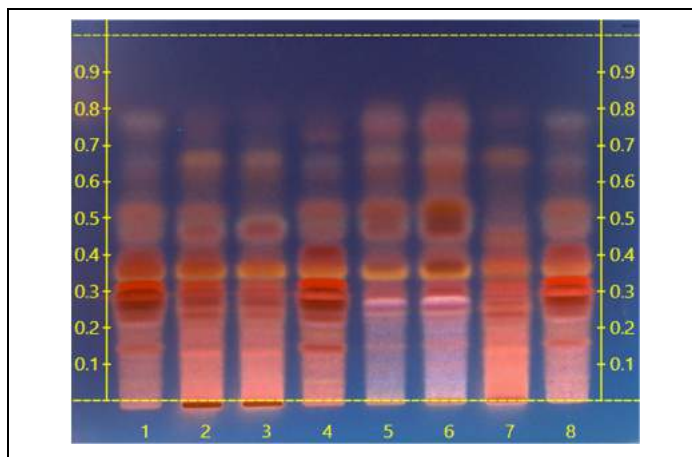
Work performed at:
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12661 Hoover Street
Garden Grove, CA 92841
714-754-HERB (4372)
714-668-9972 (FAX)
Sales@Alkemist.com
www.Alkemist.com

Certificate of Analysis: CTLA 42975 (CTLA 42975)
High Performance Thin-Layer Chromatography with Photo-Documentation

1



2



Company Name: CTLA
Title: CTLA 42975
Plant Part: resin
Sample Received: 12/20/21
Sample Packaging: Clear Whirl-Pak
Form of Botanical: powder
Appearance: Fine Light Brown Powder
Lot Number: (CTLA 42975) → Lanes 5(0.5µl), 6(1µl)
Sample: 21354UXE_1
Latin Name: *Boswellia serrata* Roxb. [Burseraceae]
Reference Sample: Lane 2(1µl) (RK10014MBS1), Lane 3(1µl) (RK22606BIN1) *Boswellia serrata* (resin); Lane 7(1µl) (19315NMJ) *Boswellia sacra* / *Boswellia carteri* (resin); held at Alkemist Labs, Garden Grove, CA.
Analyst: A. Ung, H. Dinh, J. Mares, K. Montoya, K. Tran, N. Hoang, N. Afendikova, P. Hoang, S. Kabbaj, S. Sudberg 168141
Sample Preparation: 0.3g+3mL 100% grain Ethanol, sonicate/heat at 50°C for 30 min.
Stationary Phase: Silica gel 60, HPTLC plates
Mobile Phase: cyclohexane: Isopropyl ether: Acetic acid [6/4/1]
Detection: (1) Anisaldehyde/Sulfuric, 100°C, 2min, vis (Reich, E., 2007)
(2) Anisaldehyde/Sulfuric, 100°C, 2min, 366nm (Reich, E., 2007)
Reference Standard: Lanes 1(3µl) and 8(3µl) *Boswellia Serrata* Extract (020521, USP)
Reference Source: BTM-715-0190
IDT-SOP-72-01

Comments & Conclusions: Lanes 5, 6 are the test sample CTLA 42975 (CTLA 42975) Lanes 2, 3, 7 are the reference samples used for comparison. This test sample, CTLA 42975 (CTLA 42975), has characteristics of the chromatographic profile of *Boswellia serrata* reference samples used above. **This test sample CTLA 42975 (CTLA 42975) indicates the presence of *Boswellia serrata* resin.**

NOTE: The above conclusion may be a function of the natural variance found in botanicals &/or the extraction process used to create specific extracts. The growing and drying conditions, age, seasonal variations, geographic location, extraction solvents, etc. all play a role in the phytochemical fingerprint of botanicals as well as their extracts; hence, chromatographic variations are expected.

Examined, Reviewed & Authorized by: Khanh N Tran, HPTLC, R&D Supervisor, Alkemist Labs

Report Date: 12/27/21



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6439 Alondra Blvd, Paramount, CA 90723, USA
Tel (562) 633 8985, Fax (562) 633 8986
Website: nutrilandgroup.com
Email: nutrilandgroup@outlook.com



Certificate of Analysis

Product: SAMe (S-Adenosyl-L-Methionine) Tosylate Disulfate
Batch: C201206
Manufacturing Date: Sep 2021 Retesting Date: Sep 2024
Country of Origin: China
CAS: 97540-22-2

Content	Specification	Results	Methods
Appearance:	Light yellow powder	Conforms	Visual
Identification:	Positive	Conforms	IR
Purity:	>95%	97.6%	HPLC
S,S-Isomers:	>60%	85.6%	HPLC
Ademetionine Ion:	>45%	52.2%	HPLC
P-Toluenesulfonic Acid:	>20%	22.7%	HPLC
Sulfate:	>20%	25.6%	
Loss on Drying:	<3%	1.2%	K.F.
pH:		1.4	
Solubility:	Soluble in water at a concentration of 10%		
Adenosine:	<1%	0.02%	
Methylthioadenosine:	<2%	0.12%	
Heavy Metals:	<10 ppm	Conforms	USP
Arsenic:	<2 ppm	Conforms	USP
Cadmium:	<1 ppm	Conforms	USP
Lead:	<3 ppm	Conforms	USP
Mercury:	<0.1 ppm	Conforms	USP
Total Plate Count:	<1,000 cfu/g	Conforms	USP
Mold & Yeast:	<100 cfu/g	Conforms	USP
Coliforms:	Negative	Conforms	USP
E. Coli:	Negative	Conforms	USP
Salmonella:	Negative	Conforms	USP
Staphylococcus Aureus:	Negative	Conforms	USP

GMO Statement: Non-GMO
Standard: USP Food grade
Treatment: None

Note: *It is hygroscopic powder and absorb moisture fast when expose to air.*

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Digitally Signed By QC Director:

A handwritten signature in black ink, appearing to read "Michael Ma", is written over a horizontal line. Below the line, the name "Michael Ma" is printed in a small, sans-serif font.

Certificate of Analysis

Sample Information

CTLA ID: 42717
 Date Received: 11/30/2021
 Sample Name: 10623 DRM SAME Tosylate Disulfate (50% s-adenosyl-l-methionine)
 Lot Number: 39913
 Customer: Origin Nutraceutical

Analysis	Method	MDL	Specification	Result	Units
ID, Rapid Complete Micro Combo					
ID	FTIR		Report	97.0	%
Total Plate Count	USP <2021>	100	Report	<100	cfu/g
Total Coliforms	BAM CH.4	10	Report	<10	cfu/g
<i>E. coli</i>	USP <2022>		Report	Negative	
<i>Salmonella</i>	USP <2022>		Report	Negative	
<i>Staphylococcus aureus</i> <2022>	USP <2022>		Report	Negative	
Rapid Yeast and Mold	AOAC 2014.05	10	Report	<10	cfu/g
FTIR Spectra	FTIR		Report	Attached	
S-Adenosyl Methionine	HPLC	0.002	Report	99.6	%

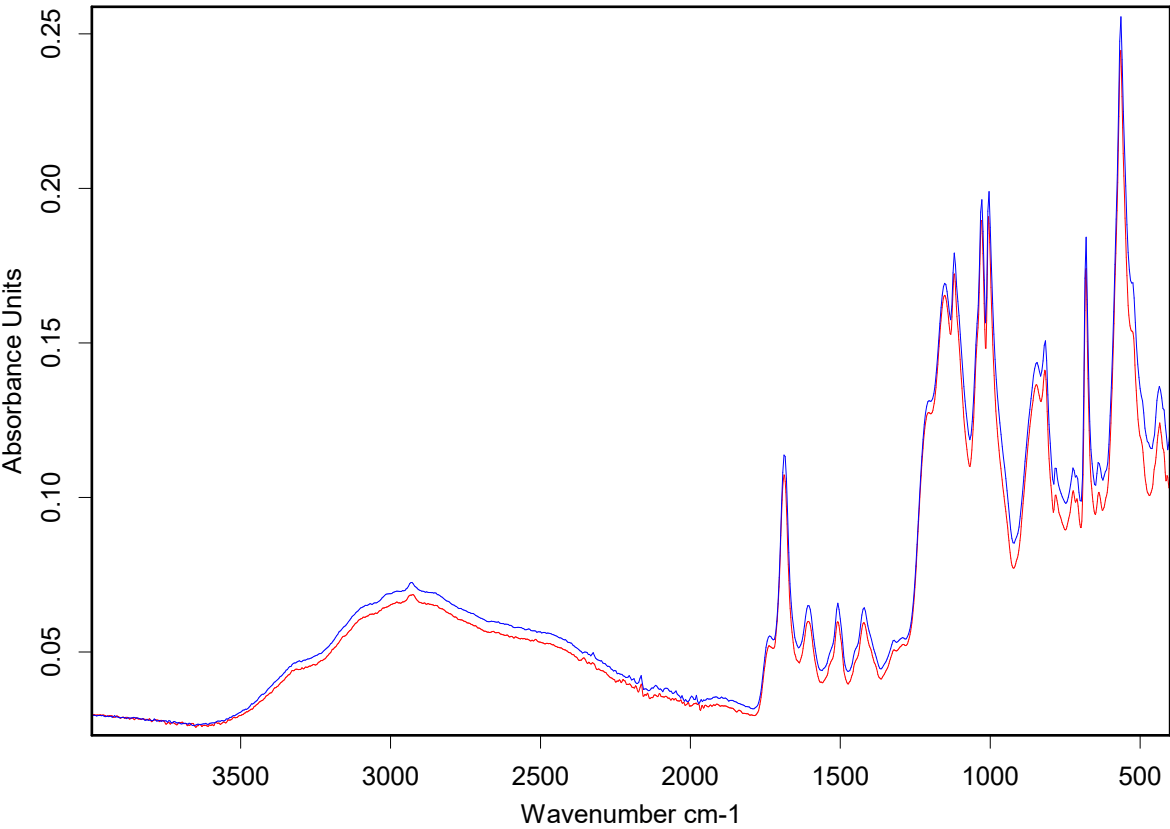
12/23/2021

DATE



Quality Manager

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Product Number	ON S-Adenosyl-L-Methionine Disulfate Tosyla
Entry No.	2023
Library name	ORIGIN STANDARDS LIBRARY.S01
Library description	Origin Nutraceutical
Copyright	Origin Nutraceutical Materials Only

Color	Hit Quality	Compound name	CAS Number	Molecular formula	Molecular weight
	970	ON S-Adenosyl-L-Methionine Disulfate Tosylate C190204 Standard 1			

Color	File	Path	Spectrum Type
	42717-ON 10623 DRM SAME Tosylate Disulfate (50% S-Ad	C:\Users\Israel\Documents\Bruker\OPUS_7.5.18\Data\MEAS	Query Spectrum



American SanjiangBio Nutrition Inc

Certificate of Analysis

Product Name: **Turmeric (Curcumin) P.E. 95%**
Batch Number: **10160**
Botanical Source: *Curcuma Longa*
Part Used: Rhizomes
Carrier Used: None
Country of Origin: India
Manufacture Date: May-21
Expiration Date: Apr-24

Analysis	Specification	Result	Test Method
Identification	Positive	Positive	TLC
Assay (Curcuminoids)	NLT 95%	96.23%	HPLC
Appearance	Fine Powder	Complies	Visual
Color	Orange Yellow	Complies	Visual
Odor	Characteristic	Complies	Organoleptic
Taste	Characteristic	Complies	Organoleptic
Particle Size	NLT 90% through 80 mesh	Complies	USP<786>
Loss on Drying	NMT 5.0%	0.95%	USP<731>
Solvent Residue	Complies USP	Complies	USP<467>, GCMS
Carrier	None	None	In House
Bulk Density	0.40g/ml - 0.70g/ml	0.46g/ml	USP 40
Arsenic (As)	NMT 1.5ppm	<1ppm	USP 40
Lead (Pb)	NMT 1ppm	<1ppm	USP 40
Cadmium (Cd)	NMT 1ppm	<0.5ppm	USP 40
Mercury (Hg)	NMT 1ppm	<1ppm	USP 40
Total Plate Count	NMT 1,000cfu/g	150cfu/g	USP<2021>
Total Yeast & Mold	NMT 100cfu/g	<10cfu/g	USP<2021>
E. Coli.	Negative	Complies	USP<2021>
Salmonella	Negative	Complies	USP<2021>
Staphylococci	Negative	Complies	USP<2021>

Packing & Storage: Polyethylene bag in plastic drum. 25 kg net.
Store in tight, light resistant containers, and avoid exposure to direct sunlight, moisture and excessive heat.
This being a product of Natural Origin, minor color variations are observed due to geographical and seasonal variations of the raw material.

This Certificate of Analysis reflects results reported by our supplier and/or independent laboratory.

Compliance Officer: Nina Dong

Distributor: American SanjiangBio Nutrition Inc
20258 Paseo Del Prado Walnut, CA 91789; Tel:909-595-3080; Fax:909-595-3089;
www.americansanjiangbio.com

Certificate of Analysis

Sample Information

CTLA ID: 42715
Date Received: 11/30/2021
Sample Name: 10072 DRM Curcumin PE 95% - Turmeric
Lot Number: 39893
Customer: Origin Nutraceutical

Analysis	Method	MDL	Specification	Result	Units
ID	FTIR		Report	95.1	%
FTIR Spectra	FTIR		Report	Attached	
Rapid Complete Micro					
Total Plate Count	USP <2021>	100	Report	<100	cfu/g
Total Coliforms	BAM CH.4	10	Report	<10	cfu/g
<i>E. coli</i>	USP <2022>		Report	Negative	
<i>Salmonella</i>	USP <2022>		Report	Negative	
<i>Staphylococcus aureus</i> <2022>	USP <2022>		Report	Negative	
Rapid Yeast and Mold	AOAC 2014.05	10	Report	<10	cfu/g
Curcuminoids	HPLC		Report	95.792	%
HPTLC	HPTLC		Report	Attached	

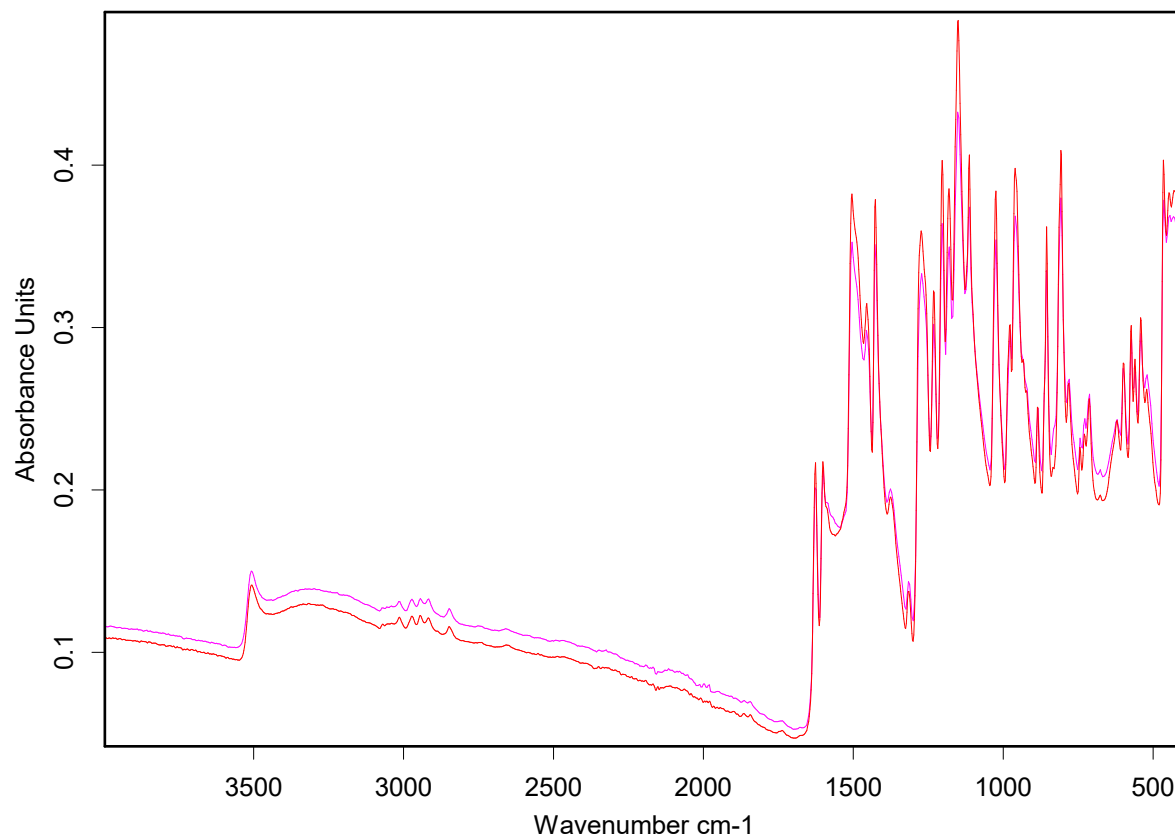
12/13/2021

DATE



Quality Manager

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Product Number	ON 10072 DRM curcumin PE 95%- Turmeric 1
Entry No.	1704
Library name	ORIGIN STANDARDS LIBRARY.S01
Library description	Origin Nutraceutical
Copyright	Origin Nutraceutical Materials Only

Color	Hit Quality	Compound name	CAS Number	Molecular formula	Molecular weight
	951	ON 10072 DRM curcumin PE 95%- Turmeric 17470 Standrd 2			

Color	File	Path	Spectrum Type
	42715-ON 10072 DRM Curcumin PE 95% -Turmeric 39893.0	C:\Users\Israel\Documents\Bruker\OPUS_7.5.18\Data\MEAS	Query Spectrum

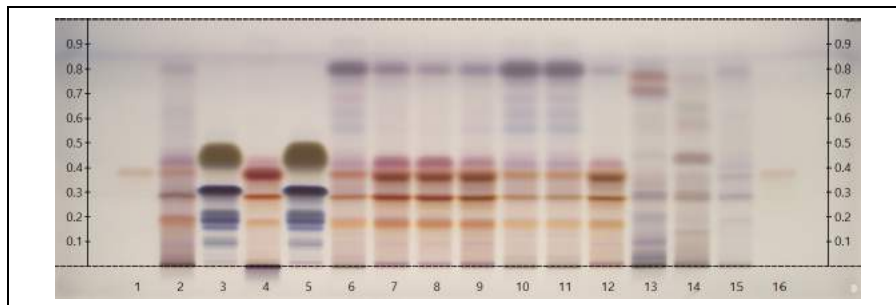
Certificate Issued To:
CTLA
151 E 3450 N
Spanish Fork, UT 84660-8507
USA



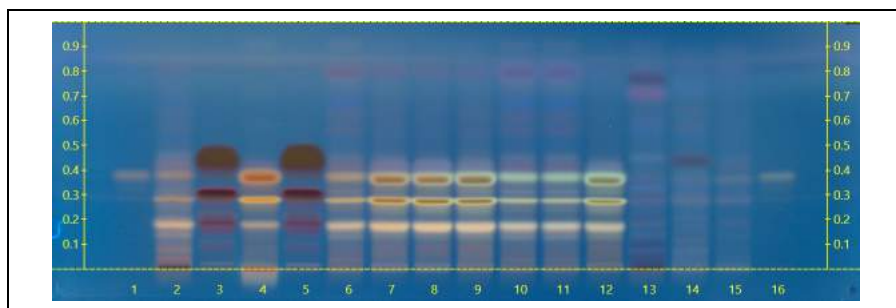
Work performed at:
Alkemist Labs
12661 Hoover Street
Garden Grove, CA 92841
714-754-HERB (4372)
714-668-9972 (FAX)
Sales@Alkemist.com
www.Alkemist.com

Certificate of Analysis: CTLA 42715 (42715)
High Performance Thin-Layer Chromatography with Photo-Documentation

1



2



Company Name:
Title:
Plant Part:
Appearance:
Sample Packaging:

CTLA
CTLA 42715
root
Bright orange powder
Clear Whirl-Pak

Sample Received: 12/06/21
Form of Botanical: powder
Lot Number: (42715) → Lane 12(2µl)
Sample: 21340KWW_1

Latin Name:
Reference Sample:

Curcuma longa L. [Zingiberaceae]
Lane 2(2µl) (SF21010CRB) *Curcuma longa* (root); Lane 3(2µl) (LSI29218PG1) *Glanbia Curowhite* (White Curcumin) 25% (root); Lane 13(2µl) (KTU04214SWH2) *Curcuma phaeocaulis* (root); Lane 14(2µl) (KTQ15915SWH1) *Curcuma zedoaria* (rhizome); Lane 15(2µl) (KPT15915SWH1) *Curcuma* sp. (root); held at Alkemist Labs, Garden Grove, CA. A. Ung, H. Waldstreicher, H. Dinh, J. Mares, K. Montoya, K. Tran, N. Hoang, N. Afendikova, P. Hoang, S. Kabbaj, S. Sudberg 167278

Analyst:

Sample Preparation:

0.3g+3mL Methanol, sonicate/heat at 50°C for 30 min.

Stationary Phase:

Silica gel 60, HPTLC plates

Mobile Phase:

chloroform: ethanol: Acetic acid [9.5/0.5/0.1]

Detection:

(1) Vanillin/Sulfuric, 110°C, 2min, vis (Reich, E., 2007)
(2) Vanillin/Sulfuric, 110°C, 2min, 366nm (Reich, E., 2007)

Reference Standard:

Lanes 1(2µl) and 16(2µl) Curcumin (R080W0, USP)

Reference Source:

BTM-715-0009

IDT-SOP-72-01

Comments & Conclusions: Lane 12 is the test sample CTLA 42715 (42715). Lanes 2, 3, 13, 14, 15, are the reference samples used for comparison. This test sample, CTLA 42715 (42715) is consistent with the chromatographic profile of the reference samples of *Curcuma longa*, used above. **This test sample CTLA 42715 (42715) has characteristics of *Curcuma longa* root.**

NOTE: The above conclusion may be a function of the natural variance found in botanicals &/or the extraction process used to create specific extracts. The growing and drying conditions, age, seasonal variations, geographic location, extraction solvents, etc. all play a role in the phytochemical fingerprint of botanicals as well as their extracts; hence, chromatographic variations are expected.

Examined, Reviewed & Authorized by: Khanh N Tran, HPTLC, R&D Supervisor, Alkemist Labs

Report Date: 12/08/21



Note: Any unidentified lanes in the above chromatograms are confidential and may represent internal studies or other test samples not related to 42715. This report applies to the sample investigated and is not necessarily indicative of the quality or condition of apparently identical or similar products. This report is for the exclusive use of the party who requested the report and not for public dissemination or use by third parties, including for promotional purposes, without the prior written permission of Alkemist Labs, Inc. This report provides technical results for a specific sample and the report shall not be altered, modified, supplemented or abstracted in any manner. Any violation of these conditions renders the report and its results void. © 2021 Alkemist Labs, Inc. All Rights Reserved

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FAX: +86-595-23870569

CELL: +86-13950178560

EMAIL: DEU0007@126.COM

Certificate of Analysis

Product: Vitamin D3 Powder 100,000IU/g
Batch No: 71210308
Quantity: 9,000 KG
Manufacture Date: Mar 08, 2021
Certificate Date: Mar 08, 2021
Expiration Date: Mar 07, 2024
Origin Of Country: China

Results Analysis

Items	Standards	Results	Method
Identity for			
Vitamin D3 Powder	positive	positive	uv/usp
Appearance	white, free-flowing powder	white powder	LN method
Dispersibility in water	Dispersible	Dispersible	LN method
	100% through No 40	100% through No 40	LN method
Fineness (U.S standard sieves)	Min 90% through No 60	95% through No 60	
	Min 45% through No 100	88% through No 100	
Vitamin D3 Content	Min 100,000IU/g	104,000IU/g	hplc/ep
Loss on Drying	Max 5.0%	4.2%	105 °C 4h
Residual Solvents	The raw materials, manufacturing process and product do not contain any of the solvents listed in Residual Solvents Qualified		
Microbiological Spec			
Total Plate count	≤1000cfu/g	<10 cfu/g	usp
Mold & Yeast	≤100 cfu/g	<10 cfu/g	usp
Coliforms	≤30MPN/100g	<30MPN/100g	usp
E Coli	Negative	Negative	usp
Salmonella	Negative	Negative	usp
Staphylococcus aureus	Negative	Negative	usp
Heavy metals	≤3ppm	2.0ppm	usp
As	≤0.5ppm	0.1ppm	usp
Lead	≤0.5ppm	0.01ppm	usp
Cadmium	≤0.1ppm	0.02ppm	cns
Mercury	≤0.1ppm	≤0.01ppm	usp
Chromium	≤0.1ppm	≤0.01ppm	cns

Inspector: 刘月玲

Approved: 刘月玲



Distributed by
APP GLOBAL INC
www.appglobalinc.com
Tel: (909) 598-1767

Certificate of Analysis

Sample Information

CTLA ID: 42974
Date Received: 12/3/2021
Sample Name: 10195 Vitamin D3 100 IU/mg (0.25%)
Lot Number: 37480
Customer: Origin Nutraceutical

Analysis	Method	MDL	Specification	Result	Units
ID, Rapid Complete Micro Combo					
ID	FTIR		Report	95.6	%
Total Plate Count	USP <2021>	100	Report	<100	cfu/g
Total Coliforms	BAM CH.4	10	Report	<10	cfu/g
<i>E. coli</i>	USP <2022>		Report	Negative	
<i>Salmonella</i>	USP <2022>		Report	Negative	
<i>Staphylococcus aureus</i> <2022>	USP <2022>		Report	Negative	
Rapid Yeast and Mold	AOAC 2014.05	10	Report	<10	cfu/g
FTIR Spectra	FTIR		Report	Attached	
Vitamin D3 (Cholecalciferol)	HPLC	0.2	≥0.25	0.274	%

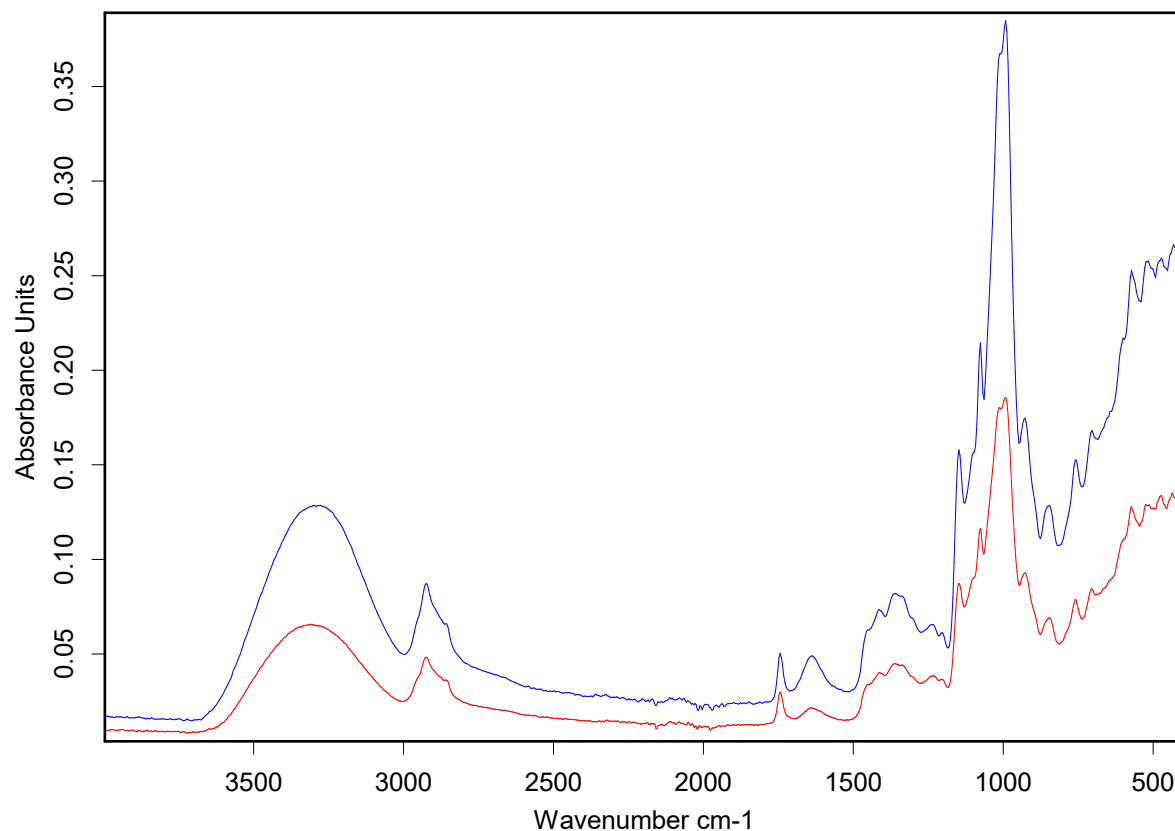
12/13/2021

DATE



Quality Manager

Specifications provided by the Customer. Results with an asterisk (*) denote Specifications should be reviewed by the Customer. This Certificate of Analysis represents data for the sample submitted and does not constitute a guarantee of quality for the entire product from which it was taken. These results are provided for the benefit of the Customer. MDL = Method Detection Limit.



Product Number	10195 Vitamin D3 53573 Standard 1
Entry No.	189
Library name	ORIGIN STANDARDS LIBRARY.S01
Library description	Origin Nutraceutical
Copyright	Origin Nutraceutical Materials Only

Color	Hit Quality	Compound name	CAS Number	Molecular formula	Molecular weight
	956	10195 Vitamin D3 53573 Standard 1			

Color	File	Path	Spectrum Type
	42974-ON 10195 Vitamin D (37480).1	C:\Users\Israel\Documents\Bruker\OPUS_7.5.18\Data\MEAS	Query Spectrum

6439 Alondra Blvd, Paramount, CA 90723, USA
Tel (562) 633 8985, Fax (562) 633 8986
Website: nutrilandgroup.com
Email: nutrilandgroup@outlook.com



Certificate of Analysis

Product:	Vitamin K ₁ 1% (Organic)		
Chemical Name:	Phytonadione or Phylloquinone		
Batch #:	210202	Batch Qty:	500kg
Manufacturing Date:	Feb 2021	Retesting Date:	Feb 2024
Country of Origin:	China		
CAS:	84-80-0		

Content	Specification	Results	Methods
Appearance:	Light yellow powder	Conforms	Visual
Particle Size:	60 mesh	Conforms	60 mesh screen
Chemical Formula:	C ₃₁ H ₄₆ O ₂		
Molecular Weight:	452.71		
Assay:	>1%	1.08%	HPLC
Loss on Drying:	<10%	1.43%	105°C, 2hrs
Carrier Used:	Maltodextrin, Arabic Gum	Conforms	
Heavy Metals:	<10 ppm	Conforms	USP
Arsenic:	<1 ppm	Conforms	USP
Cadmium:	<1 ppm	Conforms	USP
Lead:	<1 ppm	Conforms	USP
Mercury:	<0.1 ppm	Conforms	USP
Total Plate Count:	<250 cfu/g	Conforms	USP
Mold & Yeast:	<50 cfu/g	Conforms	USP
Coliforms:	<10 cfu/g	Negative	USP
E. Coli:	<10 cfu/g	Conforms	USP
Salmonella:	Negative	Conforms	USP
Staphylococcus Aureus:	<10 cfu/g	Conforms	USP

GMO Statement:	Non-GMO
Standard:	USP food grade
Treatment:	None

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Digitally Signed By QC Director:


MICHAEL MA

Certificate of Analysis

Sample Information

CTLA ID: 42973
Date Received: 12/3/2021
Sample Name: 10210 Vitamin K1 1%
Lot Number: 37613
Customer: Origin Nutraceutical

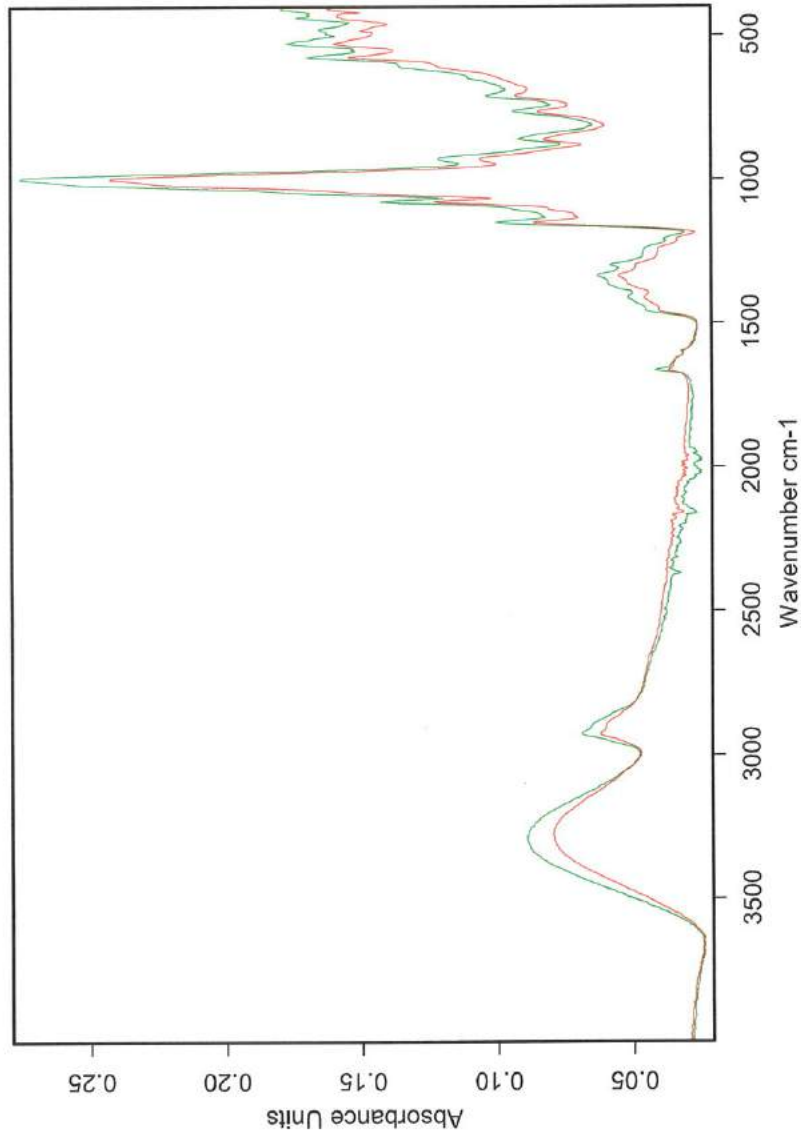
Analysis	Method	MDL	Specification	Result	Units
ID, Rapid Complete Micro Combo					
ID	FTIR		Report	96.9	%
Total Plate Count	USP <2021>	100	Report	200	cfu/g
Total Coliforms	BAM CH.4	10	Report	<10	cfu/g
<i>E. coli</i>	USP <2022>		Report	Negative	
<i>Salmonella</i>	USP <2022>		Report	Negative	
<i>Staphylococcus aureus</i> <2022>	USP <2022>		Report	Negative	
Rapid Yeast and Mold	AOAC 2014.05	10	Report	<10	cfu/g
Vitamin K1 (Phylloquinones)	HPLC	0.002	≥1	0.590 *	%
Material Quantity Adjusted					

12/20/2021
DATE



Quality Manager

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Product Number	MM-Vitamin K1(1%) 181201 Standard 1
Entry No.	57
Library name	
Library description	
Copyright	

Color	Hit Quality	Compound name	CAS Number	Molecular formula	Molecular weight
	969	MM-Vitamin K1(1%) 181201 Standard 1			

Color	File	Path	Spectrum Type
	42973-ON 10210 Vitamin K1 (37603).0	C:\Users\Israel\Documents\Bruker\OPUS_7.5.18\Data\MEAS	Query Spectrum



LA Office Phone: 1-626-538-4368 LA Office Phone: 1-626-321-0244
 Email: info@fifthnutrisupply.net Fax: 1-626-538-4373
 Fifth Nutrisupply FDA #: 11716071148

Certificate of Analysis

Product Name	Vitamin K2 MK7 1% on DCP	Mol. Formula:	C ₄₆ H ₆₄ O ₂
Origin of Country	China	Mol. Weight:	649.0
Batch Number	OT2312A	Manufacture Date	Nov 18, 2020
Batch Quantity	1000kgs	Expiration Date	Nov 17, 2022

Item	Specification	Result
Assay (HPLC, Menaquinone-7)	≥1.0%(>10000ug/g)	1.04%
Pharm. excipient (CaHPO ₄)	≥95.0%	95.2%
Identification	Yellow brown precipitate	Yellow brown precipitate
pH	7.0~8.0	7.4
Loss on drying	≤10%	8.1%
Residue on ignition	≤0.1%	<0.1%
Reducing sugar	≤0.2%	<0.2%
Starch	Negative	Negative
Fatty acid	Negative	Negative
Heavy metals	≤10ppm	<10ppm
As	≤1ppm	<1ppm
Cd	≤1ppm	<1ppm
Hg	≤1ppm	<1ppm
Pb	≤1ppm	<1ppm
Pesticides residue	Negative	Negative
Total aerobic count (CFU/g)	≤1000	Complies
Yeasts & Molds (CFU/g)	≤100	Complies
Salmonella SP.	Negative	Negative
E. Coli	Negative	Negative

Packing & Storage	Store at 0~8°C temperature .Store in a well-closed container Away from moisture.
Shelf Life	Two years if sealed and store away from direct sun light.

Approved by: Jonathan Gonzalez Date: Jan 12, 2020

CTLA ID: 42978
Date Received: 12/3/2021
Sample Name: 10275 Vitamin K2 1% (MK7)
Lot Number: 38866
Customer: Origin Nutraceutical

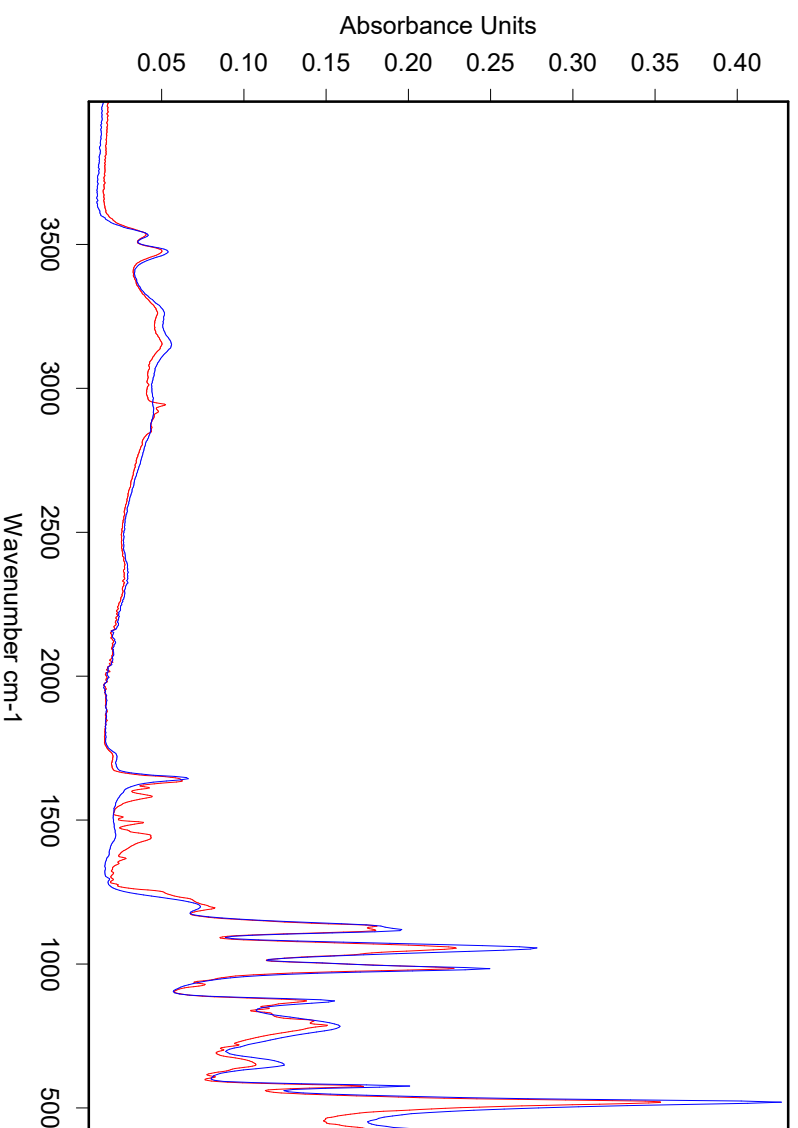
ID	FTIR	Report	95.7	%
Total Plate Count	USP <2021>	100 Report	300	cfu/g
Total Coliforms	BAM CH.4	10 Report	<10	cfu/g
<i>E. coli</i>	USP <2022>	Report	Negative	
<i>Salmonella</i>	USP <2022>	Report	Negative	
<i>Staphylococcus aureus</i> <2022>	USP <2022>	Report	Negative	
Rapid Yeast and Mold	AOAC 2014.05	10 Report	<10	cfu/g
	FTIR	Report	Attached	
	HPLC	0.002 ≥1	0.623 *	%
Material Quantity Adjusted				

12/20/2021
DATE



Quality Manager

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Product Number	39783-SNG Vitamin K2 MK7 1% TRF-202101
Entry No.	1
Library name	NUTRA PACK (NUP).S01
Library description	Nutra Pack (Nup)
Copyright	User library

Color	Hit Quality	Compound name	CAS Number	Molecular formula	Molecular weight
	957	39783-SNG Vitamin K2 MK7 1% TRF-20210120			

Color	File	Path	Spectrum Type
	42978-ON 10275 Vitamin K2(38866),0	C:\Users\Israel\Documents\Bruker\OPUS_7.5.18\Data\MEAS	Query Spectrum