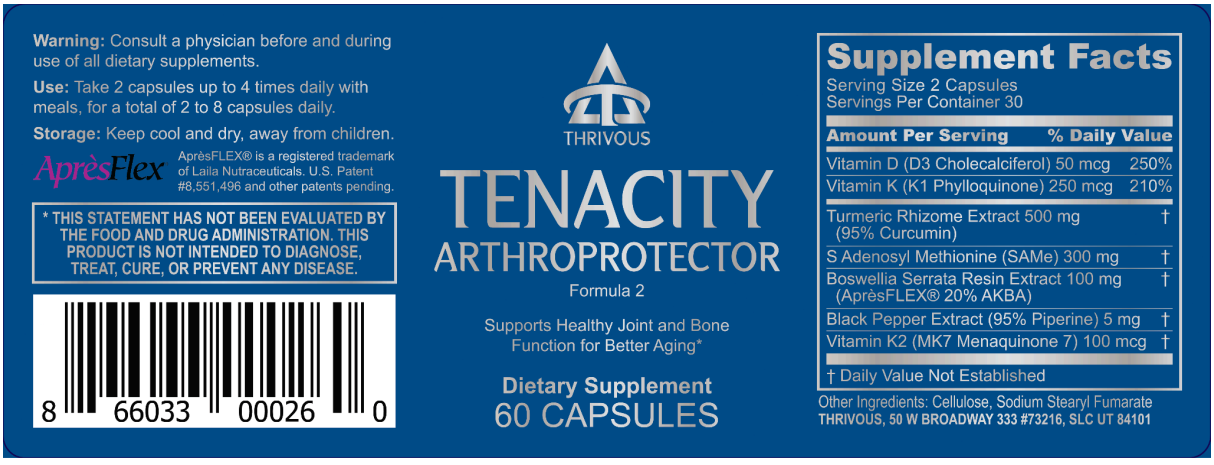
THRIVOUS

thrivous.com – support@thrivous.com – +1 801 658 9661 – 50 W Broadway 333 #73216, SLC UT 84101 USA

CERTIFICATE OF ANALYSIS AND QUALITY

Product	Tenacity Arthroprotector
SKU	TENACITY
Barcode	866033000260
Formula	2
Date	10 March 2025

Label



Certifications
Letter of Guarantee
Good Manufacturing Practice (GMP) 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

THRIVOUS
thrivous.com – support@thrivous.com – +1 801 658 9661 – 50 W Broadway 333 #73216, SLC UT 84101 USA

10 March 2025

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.

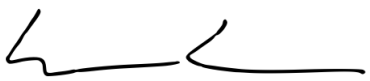
2. Product is tested by third party laboratories according to current best practices as indicated in ISO/IEC 17025.

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



Lincoln Cannon
CEO at Thrivous

State of Utah
SPENCER J. COX
Governor
DEIDRE M. HENDERSON
Lieutenant Governor

Department of Agriculture and Food

Craig W. Buttars
Commissioner
Kelly Pehrson
Deputy Commissioner
Travis Waller
Director, Regulatory Services

Certificate No.: REG-2024-16765

GOOD MANUFACTURING PRACTICE CERTIFICATE

ORIGIN NUTRACEUTICAL INC, located at, 151 E 3450 N, SPANISH FORK, UT 84660 is currently registered and inspected as a manufacturer of dietary supplements. ORIGIN NUTRACEUTICAL INC has all the facilities and equipment required to comply with the GOOD MANUFACTURING PRACTICE's (GMP's) for dietary supplements and meets the requirements of 21 CFR 117. ORIGIN NUTRACEUTICAL INC is subject to inspections at suitable intervals or in accordance to the regulations. Inspections evaluate and assures compliance with the state and federal regulations adopted through rules, which identifies the standard for proper facility construction, good manufacturing practices for dietary supplements (GMP), and fulfills requirements of those applicable laws and rules in the State of Utah.

This certificate is valid 1 (one) year from the notarized date.

UTAH DEPARTMENT OF AGRICULTURE AND FOOD

Travis Waller

Division of Regulatory Services

State of Utah, County of Salt Lake.

On this date MAY 0 9 2024 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.

Notary Public

ALEXANDRA GALLEGOS
Notary Public - State of Utah
Comm. No. 733079
My Commission Expires on
Oct 1, 2027

4315 South 2700 West, TSOB South Building, Floor 2, Taylorsville, UT 84129-2128
Telephone 801-982-2200 * facsimile 385-465-6023 * https://ag.utah.gov

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):

Chemical and Microbiological 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:	*Issue Date:*	*Expiration Date:*
March 31, 2021	March 24, 2023	June 30, 2025

Accreditation No.:	*Certificate No.:*
102267	L23-261

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.pjlabs.com

Certificate of Accreditation: Supplement

Contract Testing Laboratories of America
151 E. 3450 N., Spanish Fork, UT 84660
Contact Name: Brescia Eppley 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
Microbiological [F]	Food, Cosmetic, Supplemental, and Nutraceutical	Aerobic Plate Count	AOAC 990.12	10 CFU/g
		Escherichia Coli and Total Coliforms	AOAC 991.14	
		Enterobacteriaceae	AOAC 2003.01	
		Yeast and Mold	AOAC 2014.05	
		Escherichia Coli and Total Coliforms	AOAC 2018.13	
		Aerobic Plate Count	FDA BAM Ch. 3	
		Escherichia Coli and Total Coliforms	FDA BAM Ch. 4	
		Salmonella	FDA BAM Ch. 5	Presence or Absence
		Listeria Monocytogenes	FDA BAM Ch. 10	
		Staphylococcus Aureus	FDA BAM Ch. 12	
		Yeast and Mold	FDA BAM Ch. 18	100 CFU/g
		Yeast and Mold, Aerobic Plate Count	USP 2021	
		Escherichia Coli, Staphylococcus Aureus, Salmonella, Listeria Monocytogenes	USP 2022	Presence or Absence
		Aerobic Plate Count, Total Coliform, Yeast and Mold	USP <61>	100 CFU/g
		Escherichia Coli, Staphylococcus Aureus, Salmonella	USP <62>	Presence or Absence

Certificate of Accreditation: Supplement

Contract Testing Laboratories of America
151 E. 3450 N., Spanish Fork, UT 84660
Contact Name: Brescia Eppley 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
Chemical [F]	Food, Cosmetic, Supplemental, and Nutraceutical	Arsenic, Cadmium, Lead, Mercury	USP <233>	LOD of As = 8 ppt LOD of Cd = 4 ppt LOD of Pb = 4 ppt LOD of Hg = 4 ppt
		pH	USP <791>	LOQ = 0.01 %
		Caffeine	CTLA: M061	LOQ = 0.000 2907 %
		Cannabinoids: Total Cannabidiol (CBD) Total Tetrahydrocannabinol (THC) CBD CBDA Δ9-THC THCA Δ8-THC THCV CBDV CBDVA CBGA CBG CBN CBC CBL	CTLA: M052	LOQ = 0.062 5 %
		Mineral Analysis: Chromium (Cr) Iron (Fe) Magnesium (Mg) Zinc (Zn)	CTLA: M068	LOD for Mg, Fe, and Zn = 5.000 ppb LOD for Cr = 0.500 ppb

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	128709	**Sample Name**	30331 Tenacity Arthroprotector
Customer	Thrivous	**Lot Number**	2432603
Date Received	2/17/2025	**Date Complete**	3/6/2025
Customer Address:			

ANALYSIS	SPECIFICATION	RESULT	METHOD	MDL	UNITS
Total Aerobic Microbial Count	Report	<100	USP <2021>	100	cfu/g
Total Coliforms (BAM) (MOD)	Report	<10	BAM CH. 4	10	cfu/g
E. Coli Bam (MOD)	Report	Absent	BAM CH. 4		
Salmonella	Report	Absent	USP <2022>		
Staphylococcus aureus	Report	Absent	USP <2022>		
Rapid Yeast and Mold	Report	<10	AOAC 2014.05	10	cfu/g
Arsenic	Report	<0.001	<USP 233>	0.001	ppm
Cadmium	Report	0.002	<USP 233>	0.001	ppm
Mercury	Report	<0.001	<USP 233>	0.001	ppm
Lead	Report	<0.001	<USP 233>	0.001	ppm

COA Note: Amended report:
duplicate COA

Approved By:

Date: 3/6/2025

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 202
Spanish Fork, UT 84660

ISO 17025:2017 ACCREDITED LABORATORY

ORIGINAL

EMBOCAPS® by SUHEUNG

CERTIFICATE OF ANALYSIS

Issued date : Feb. 16, 2023

Product Description Empty Hard Capsule From Hypromellose (HPMC)

Customer :	SUHEUNG-AMERICA	U.S.A	Manufacturing Date :	Jan. 03, 2023	
Capsule Type :	EMBO CAPS®	AP "Kosher and Halal Certified"	Expiration Date :	Jan. 02, 2028	
Capsule Item No. :	AP0A051A051		Quantity :	13,800,000 PCS	(138 Cartons)
Lot Number :	AP0A051A051 - 232601		Carton No. :	1 - 138	
Product Size :	0				
Product Code :		CAP	BODY		
	Color	A051 (CLEAR)	A051 (CLEAR)		

Composition

Cap	Hypromellose	qsp 100	Body	Hypromellose	qsp 100

Analytical Results

Test Items		Unit	Standard	Results	Test Method
Length	Cap	mm	10.3 ~ 11.1	10.7	In-house Spec.
	Body	mm	18.0 ~ 18.8	18.4	In-house Spec.
Weight		mg	84.6 ~ 105.4	93.3	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	12'35"	USP/EP
Loss on Drying		%	3.0 ~ 7.0	5.5	USP/EP
Residue on Ignition (Ash)*		%	NMT 3.0	0.3	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

* Reduced frequency testing

Elemental Impurities

Suheung Empty Hard Capsules comply with ICH Q3D for elemental impurities and meeting below acceptance level.
Elemental impurities test results based on continuous monitoring program.

Elemente	Unit	Acceptance level
Arsenic	ppm	NMT 1.0
Lead	ppm	NMT 1.0
Cadmium	ppm	NMT 0.5
Mercury	ppm	NMT 0.1
Cobalt	ppm	NMT 5
Vanadium	ppm	NMT 10
Nickel	ppm	NMT 20

Ingredients List

Ingredients Name	E Nr	Cl 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 .

Jm 2/16

Quality Assurance Manager

* ORDER NO. HC6933

Suheung Co., Ltd.
Plant : 61, Osongsaengmyeong-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

CTLA
Contract TESTING Laboratories
OF AMERICA

Certificate of Analysis

Sample Information

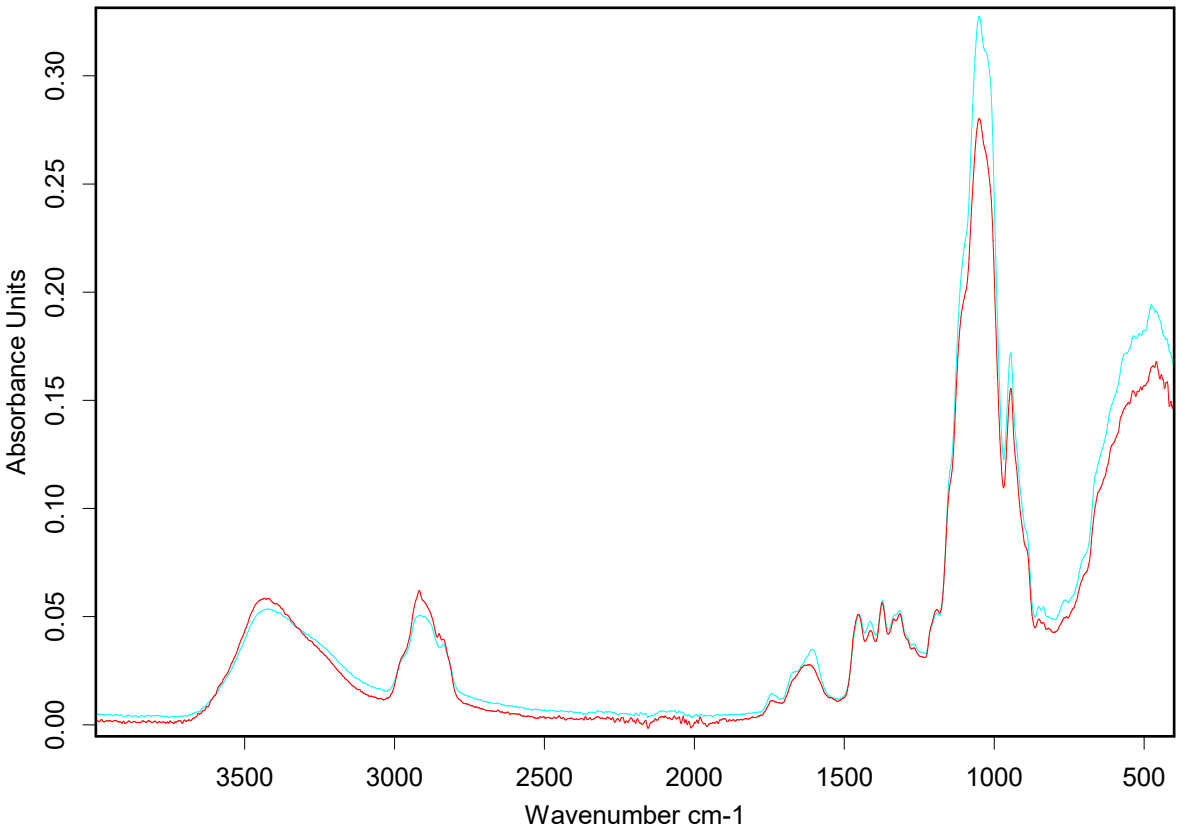
CTLA ID: 114898
Date Received: 9/23/2024
Sample Name: 10548 CPS EMBO-AP Delayed Release Size 0 HPMC
Lot Number: 57794
Customer: Origin Nutraceutical

Analysis	Method	MDL	Specification	Result	Units
ID	FTIR		Report	95.0	%
FTIR Spectra	FTIR		Report	Attached	

9/26/2024
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. This document is not to be altered or reproduced except by the original authorizing body (CTLA)



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

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

Color	File	Path	Spectrum Type
	114898-ON 10548 CPS EMBO-AP Delayed Release Size 0 H	C:\Users\CTLA Admin\Documents\Bruker\OPUS_7.5.18\DATA\MEAS	Query Spectrum

JRS PHARMA FAMILY

PRUV®

Sodium Stearyl Fumarate Ph. Eur., NF, JPE

CERTIFICATE OF ANALYSIS

Batch No.: **3098** Manufacturing Site: Polanco, Spain
Re-evaluation date: 10/2024
Manufacturing date: 10/2021

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	Max. 5.0%	3.0 %	Ph. Eur., NF, JPE
Lead[1]	Max. 0.001%	< 0.001%	USP
Heavy metals	Max. 0.002%	< 0.002%	JPE
Saponification value	142.2 - 146.0	144.9	NF, JPE
Limit of Sodium stearyl maleate[2]	Max. 0.25%	< 0.25 %	NF
Limit of Stearyl alcohol [2]	Max. 0.5%	< 0.5 %	NF
Assay	99.0 - 101.5%	99.9 %	Ph. Eur., NF, JPE
Related substances (Ph. Eur.)	Largest single impurity max. 0.5%	0.2 %	Ph. Eur.
	Total Impurities max. 5.0%	0.4 %	Ph. Eur.
Related substances (JPE)[1]	Conforms	Conforms	JPE
Identification (2)	Responds to qualitative test (1) for sodium salt	Conforms	JPE
Arsenic[1]	Max. 2 ppm	< 2 ppm	JPE
Specific Surface Area (Blaine)	1.2 - 2.0 m^2/g	1.4 m^2/g	Ph. Eur.
Residual Solvents (GC)[3]	Acetone max. 500 ppm	< 500 ppm	JRS method
	Toluene max. 890 ppm	< 890 ppm	JRS method
Particle size distribution (Laser diffraction)	d10: max. 2.5 µm	1.6 µm	JRS method
	d50: max. 20 µm	8 µm	JRS method
	d90: max. 45 µm	22 µm	JRS method

1) Results reported are expected results based on historical data.

Zpruvp04

2) Additional data in attachment.

3) The raw materials, manufacturing process and product do not contain any of the solvents listed in Residual Solvents (USP<467>, Ph. Eur. <5.4>) except toluene and acetone.
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.
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.

The batch described by this certificate meets the requirements of Ph. Eur., NF, and JPE monographs for "Sodium Stearyl Fumarate" current edition.

2022-01-12
Ref: JRS Pharma LP

Stefanie Henker
QUALITY ASSURANCE
Pharmaceutical and Food Excipients

JRS PHARMA GMBH & CO. KG

Holzmühle 1 · 72359 Rosenfeld (Germany)
Phone +49 7967 152-312
Fax +49 7967 152-445
ExcipientsService@JRSPharma.de · www.jrspharma.com · www.prus.de
Customer Service +49 7967 152-312

JRS PHARMA LP

2981 Route 22, Suite 1 · Patterson, NY 12563-2359 (USA)
Toll Free +1 (800) 452-2457
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service@jrspharma.com · www.jrspharma.com
Customer Service +1 (845) 878 3414

CTLA
Contract TESTING Laboratories
OF AMERICA

Certificate of Analysis

Sample Information

CTLA ID: 118292
Date Received: 10/29/2024
Sample Name: 10530 EXC PRUV (Sodium Stearyl Fumarate)
Lot Number: 47191
Customer: Origin Nutraceutical

Analysis	Method	MDL	Specification	Result	Units
ID, Rapid Complete Micro Combo					
ID	FTIR		Report	96.7	%
Total Aerobic Microbial Count (USP)	USP <2021>	100	Report	<100	cfu/g
Total Coliforms (USP)	USP <2021> (MOD)	10	Report	<10	cfu/g
E. coli	USP <2022> (MOD)		Report	Absent	
Salmonella	USP <2022>		Report	Absent	
Staphylococcus aureus <2022>	USP <2022>		Report	Absent	
Rapid Yeast and Mold	AOAC 2014.05	10	Report	<10	cfu/g
FTIR Spectra	FTIR		Report	Attached	

11/1/2024
DATE

Quality Manager

Specifications provided by the Customer. Results with an asterisk (*) denote Specifications should be reviewed by the Customer.
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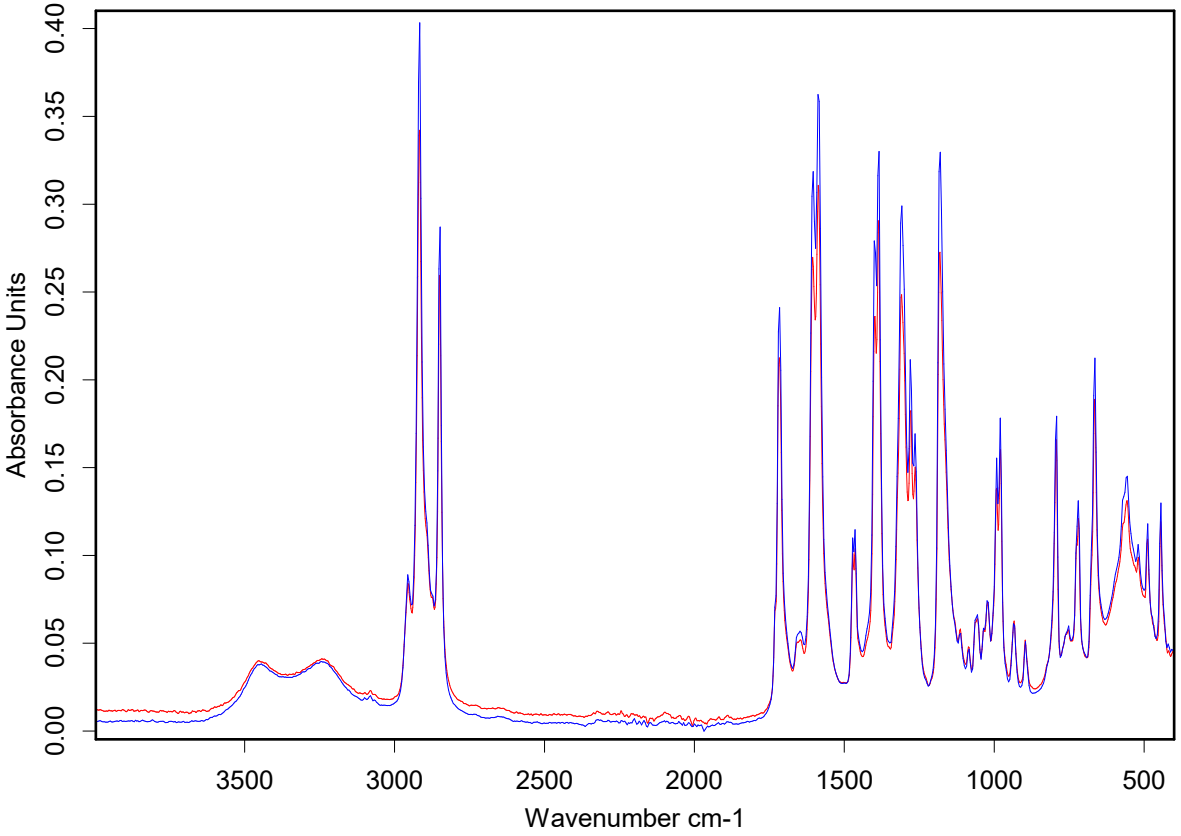


Product Number	10530 PRUV 4862 Standard 2
Entry No.	870
Library name	ORIGIN STANDARDS LIBRARY.S01
Library description	
Copyright	

Color	Hit Quality	Compound name	CAS Number	Molecular formula	Molecular weight
	972	10530 PRUV 4862 Standard 2			

Color	File	Path	Spectrum Type
	118292-ON 10530 EXC PRUV (Sodium Stearyl Fumarate) (47	C:\Users\CTLA Admin\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	*Piper nigrum*	Plant part used	Fruit (Berries)
Batch No	421H235290	Country of Origin	India
Mfg. Date	DEC 2023	Exp. Date	DEC 2026

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	0.28% 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	95.85%	In-house HPLC
Heavy metals	Total – NMT 10 ppm Lead – NMT 2.0 ppm Arsenic – NMT 0.5 ppm Cadmium – NMT 0.5 ppm Mercury – NMT 0.5 ppm	Complies Complies Complies Complies Complies	USP40<231>II ICP-MS ICP-MS ICP-MS 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.

CTLA Contract TESTING Laboratories OF AMERICA

Certificate of Analysis

Sample Information

CTLA ID: 118289
Date Received: 10/29/2024
Sample Name: 10383 Black Pepper Extract 95% Piperine
Lot Number: 56342
Customer: Origin Nutraceutical

Analysis	Method	MDL	Specification	Result	Units
ID, Rapid Complete Micro Combo					
ID	FTIR		Report	96.7	%
Total Aerobic Microbial Count (USP)	USP <2021>	100	Report	700	cfu/g
Total Coliforms (USP)	USP <2021> (MOD)	10	Report	<10	cfu/g
E. coli	USP <2022> (MOD)		Report	Absent	
Salmonella	USP <2022>		Report	Absent	
Staphylococcus aureus <2022>	USP <2022>		Report	Absent	
Rapid Yeast and Mold	AOAC 2014.05	10	Report	<10	cfu/g
Piperine	HPLC	0.053	95	100.684	%
FTIR Spectra	FTIR		Report	Attached	
HPTLC	HPTLC		Report	Characteristic	

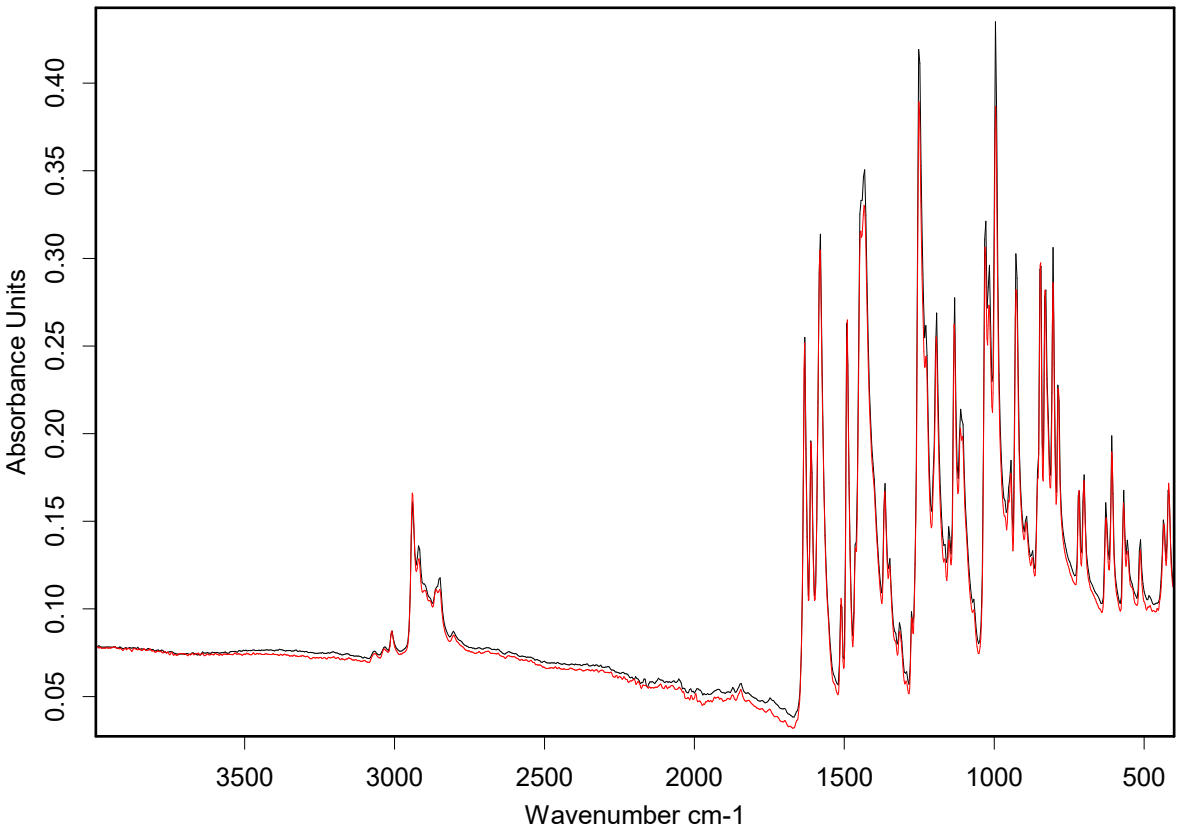
Amended report: test added

HPTLC: test sample indicates the presence of a customized extract derived from *Piper nigrum* (Piperine)

2/4/2025
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. This document is not to be altered or reproduced except by the original authorizing body (CTLA)



Product Number	10383 Black Pepper 95% 62381 Standard 1
Entry No.	356
Library name	ORIGIN STANDARDS LIBRARY.S01
Library description	
Copyright	

Color	Hit Quality	Compound name	CAS Number	Molecular formula	Molecular weight
	967	10383 Black Pepper 95% 62381 Standard 1			

Color	File	Path	Spectrum Type
	118289-ON 10383 Black Pepper Extract 95% Piperine (5634	C:\Users\CTLA Admin\Documents\Bruker\OPUS_7.5.18\DATA\MEAS	Query Spectrum

FYSOLATE®
TECHNOLOGIES

FYSOLATE TECHNOLOGIES

CERTIFICATE OF ANALYSIS

Product Name	: ApresFlex	Botanical Name	: *Boswellia serrata*
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-HS	NMT 300 ppm	Not detected	LI/QC/GC/STP-01A
	b) Methyl isobutyl ketone (MIBK) by GC-HS	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

ADM. OFF: 40-15-14, BRINDAVAN COLONY, VIJAYAWADA - 520 010, INDIA.
Tel: +91-866-6668001, 2473468, 2476561, Fax : +91-866-2475278, 6668006
fysolate@gmail.com

FYSOLATE TECHNOLOGIES

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 24×36×350G double lined LDPE poly bags.
Note:
1. * Results are based on Historical Data, testing every 20th lot.
2. **Testing is carried out on contract testing Laboratory.
3. ***Testing will be done once in a year on skip lot basis.
4. "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 Lee
PREPARED BY
13/07/2020

REVIEWED BY
13/07/2020

S. Sing
APPROVED BY
13/07/2020

ADM. OFF: 40-15-14, BRINDAVAN COLONY, VIJAYAWADA - 520 010, INDIA.
Tel: +91-866-6668001, 2473468, 2476561, Fax : +91-866-2475278, 6668006
fysolate@gmail.com

CTLA
Contract TESTING Laboratories
OF AMERICA

Certificate of Analysis

Sample Information

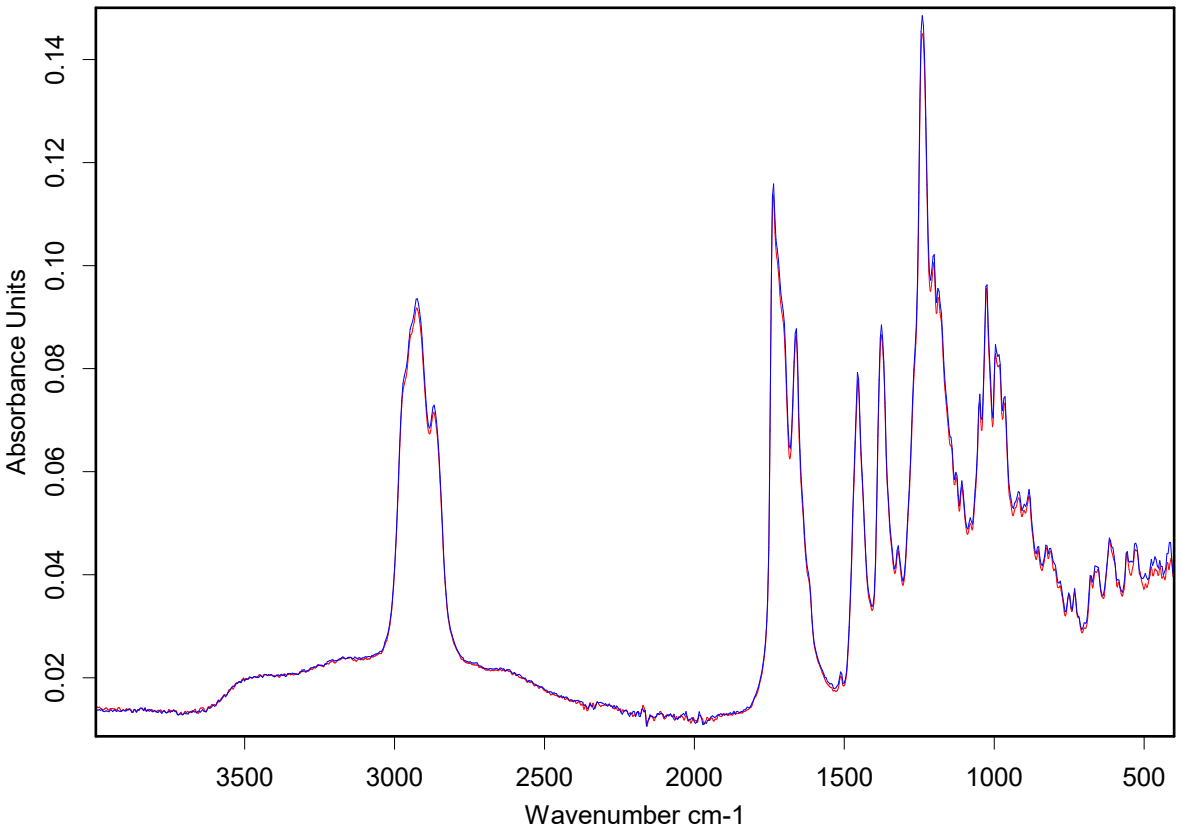
CTLA ID:	42975
Date Received:	12/3/2021
Sample Name:	10624 Boswellia Serrata Resin Extract
Lot Number:	29560
Customer:	Origin Nutraceutical

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	BAM CH.4	10	Report	<10	cfu/g
E. coli	USP <2022>		Report	Negative	
Salmonella	USP <2022>		Report	Negative	
Staphylococcus aureus <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	
Benzoic Acid	HPLC		≥20	25.05	%

12/29/2021
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 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

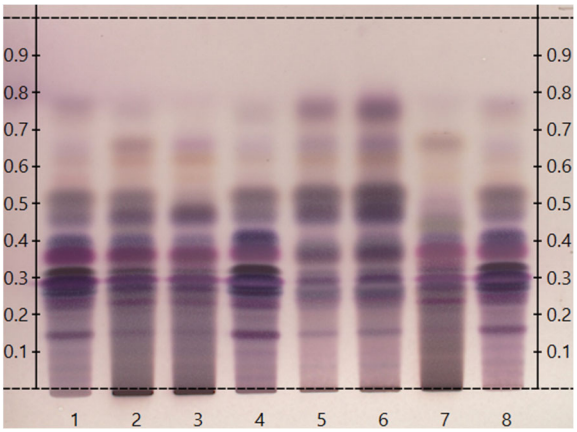
Certificate Issued To:
CTLA
151 E 3450 N
Spanish Fork, UT 84660-8507
USA

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

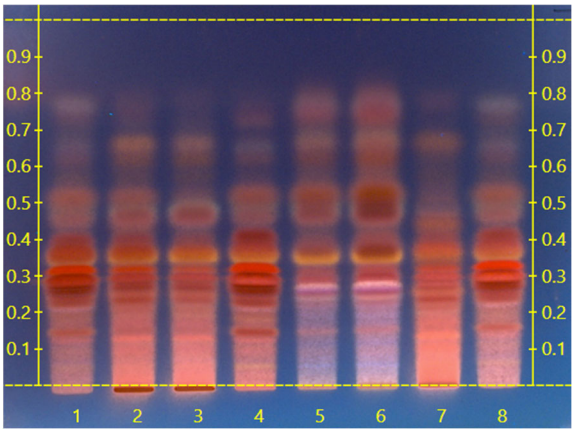
Certificate of Analysis: CTLA 42975 (CTLA 42975)

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

ISO/IEC 17025
ACCREDITED
CERTIFICATE #3851.01

Note: Any unidentified lanes in the above chromatograms are confidential and may represent internal studies or other test samples not related to CTLA 42975.

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

Nutriland Group, Inc

Certificate of Analysis

Product:	SAMe (S-Adenosyl-L-Methionine) Tosylate Disulfate		
Batch:	258-24090312		
Manufacturing Date:	Sep 2024	Retesting Date:	Sep 2026
Country of Origin:	China		
CAS:	97540-22-2		

Content	Specification	Results	Methods
Appearance:	Light yellow powder	Conforms	Visual
Identification:	Positive	Conforms	IR
Purity:	>95%	98.5%	HPLC
S,S-Isomers:	>60%	78.7%	HPLC
Ademetionine Ion:	>45%	50.2%	HPLC
P-Toluenesulfonic Acid:	>20%	23.2%	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.*

Digitally Signed By QC Director:

CTLA
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OF AMERICA

Certificate of Analysis

Sample Information

CTLA ID: 118291
Date Received: 10/29/2024
Sample Name: 10623 SAMe Tosylate Disulfate
Lot Number: 58351
Customer: Origin Nutraceutical

Analysis	Method	MDL	Specification	Result	Units
ID, Rapid Complete Micro Combo					
ID	FTIR		Report	96.4	%
Total Aerobic Microbial Count (USP)	USP <2021>	100	Report	<100	cfu/g
Total Coliforms (USP)	USP <2021> (MOD)	10	Report	<10	cfu/g
E. coli	USP <2022> (MOD)		Report	Absent	
Salmonella	USP <2022>		Report	Absent	
Staphylococcus aureus <2022>	USP <2022>		Report	Absent	
Rapid Yeast and Mold	AOAC 2014.05	10	Report	<10	cfu/g
S-Adenosyl Methionine	HPLC	0.917	50	51.927	%
FTIR Spectra	FTIR		Report	Attached	

11/20/2024
DATE

Quality Manager

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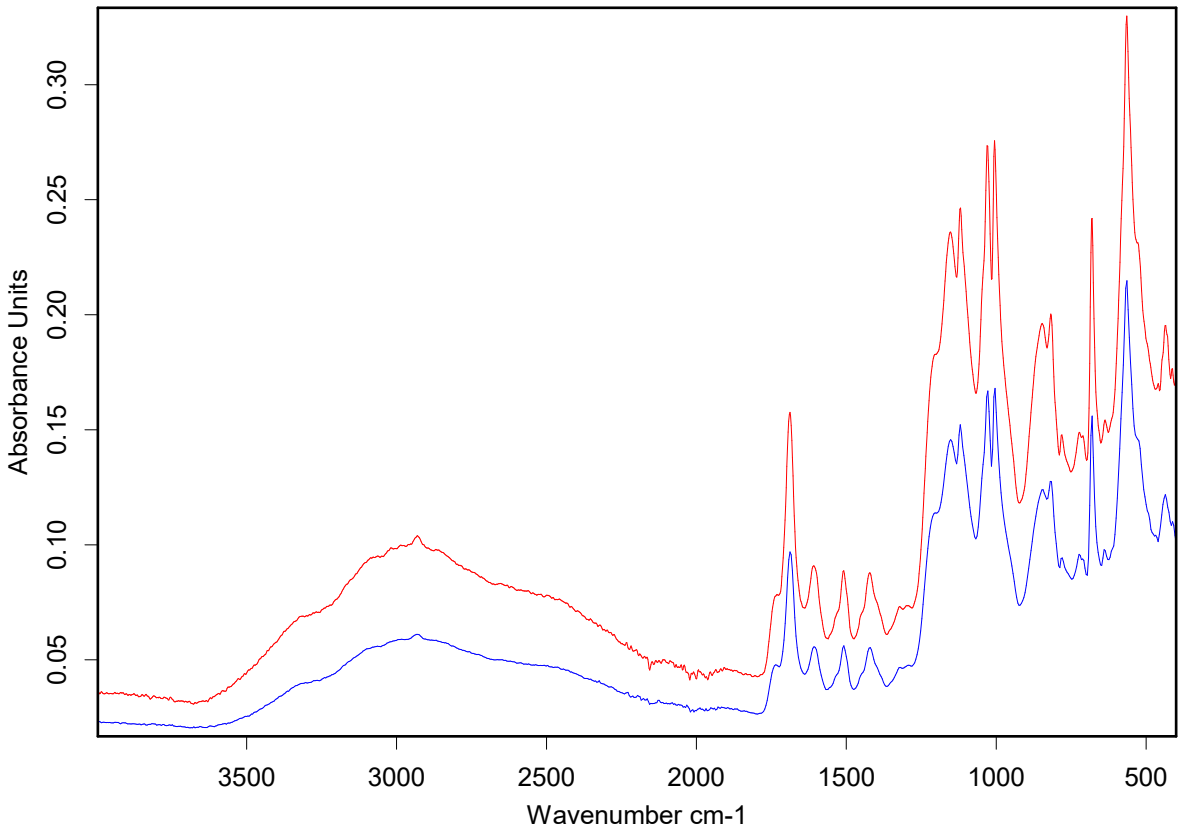

Product Number	-ON 10623 DRM SAMe (S-Adenosyl Methioni
Entry No.	1977
Library name	ORIGIN STANDARDS LIBRARY.S01
Library description	
Copyright	

Color	Hit Quality	Compound name	CAS Number	Molecular formula	Molecular weight
	964	-ON 10623 DRM SAMe (S-Adenosyl Methionine) (23747) Standard 2			

Color	File	Path	Spectrum Type
	118291-ON 10623 SAMe Tosylate Disulfate (58351).0	C:\Users\CTLA Admin\Documents\Bruker\OPUS_7.5.18\DATA\MEAS	Query Spectrum

American SanjiangBio Nutrition Inc.

Certificate of Analysis

Product Name	Turmeric Extract	**Botanical Source**	*Curcuma Longa*
Batch Number	10180823	**Country of Origin**	India
Part Used	Root	**Manufacture Date**	08.2023
Solvent	Ethyl acetate	**Expiration Date**	07.2026

ANALYSIS	SPECIFICATION	RESULTS	TEST METHODS
Identification	Conform to R.S.	Conforms	TLC
Assay	NLT95% Total Curcuminoids	95.61%	HPLC
Chemical Physical Control			
Characters/Appearance	Fine Crystalline Powder	Conforms	Visual
Color	Orange Yellow	Conforms	Visual
Odor	Characteristic	Conforms	Organoleptic
Taste	Characteristic	Conforms	Organoleptic
Mesh Size/Sieve Analysis	NLT 100% Through 40 mesh	Conforms	40 Mesh Screen
Bulk Density	20-50g/100ml	43g/100ml	USP
Tapped Density	30-80g/100ml	53g/100ml	USP
Loss on drying	NMT10.0%	0.71%	5g/105°C/2hrs
~~Total Ash~~	NMT5.0%	0.31%	2g/525°C/3hrs
Heavy Metals	NMT10ppm	Conforms	ICP-MS
Lead (Pb)	NMT2ppm	<0.5ppm	ICP-MS
Arsenic (As)	NMT2 ppm	<1ppm	ICP-MS
Cadmium (Cd)	NMT2 ppm	<1ppm	ICP-MS
Mercury (Hg)	NMT2 ppm	<0.1ppm	ICP-MS
Pesticide Residues	Meet the Requirement	Conforms	USP36
Solvent Residue	Meet USP Requirement	Conforms	USP36
Microbiology Control			
Total Plate Count	NMT10,000cfu/g	Conforms	AOAC
Total Yeast & Mold	NMT1,000cfu/g	Conforms	AOAC
E. Coli.	Negative	Absent	AOAC
Salmonella	Negative	Absent	AOAC
Staphylococcus	Negative	Absent	AOAC

Packing & Storage	Store in a well-closed container Away from moisture, light, oxygen. Packed in paper-drums and two plastic-bags inside.
Shelf Life	36 months under the conditions above and in its original packaging.
Compliance Officer	Chen Wang

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

CTLA Contract TESTING Laboratories OF AMERICA

Certificate of Analysis

Sample Information

CTLA ID: 118290
Date Received: 10/29/2024
Sample Name: 10072 Curcumin PE 95% - Turmeric
Lot Number: 56613
Customer: Origin Nutraceutical

Analysis	Method	MDL	Specification	Result	Units
ID, Rapid Complete Micro Combo					
ID	FTIR		Report	94.5	%
Total Aerobic Microbial Count (USP)	USP <2021>	100	Report	<100	cfu/g
Total Coliforms (USP)	USP <2021> (MOD)	10	Report	<10	cfu/g
E. coli	USP <2022> (MOD)		Report	Absent	
Salmonella	USP <2022>		Report	Absent	
Staphylococcus aureus <2022>	USP <2022>		Report	Absent	
Rapid Yeast and Mold	AOAC 2014.05	10	Report	<10	cfu/g
Curcuminoids	HPLC	.1	Report	95.812	%
FTIR Spectra	FTIR		Report	Attached	
HPTLC	HPTLC		Curcuma longa root	Characteristic	

Amended report: test added

1/16/2025
DATE

Quality Manager

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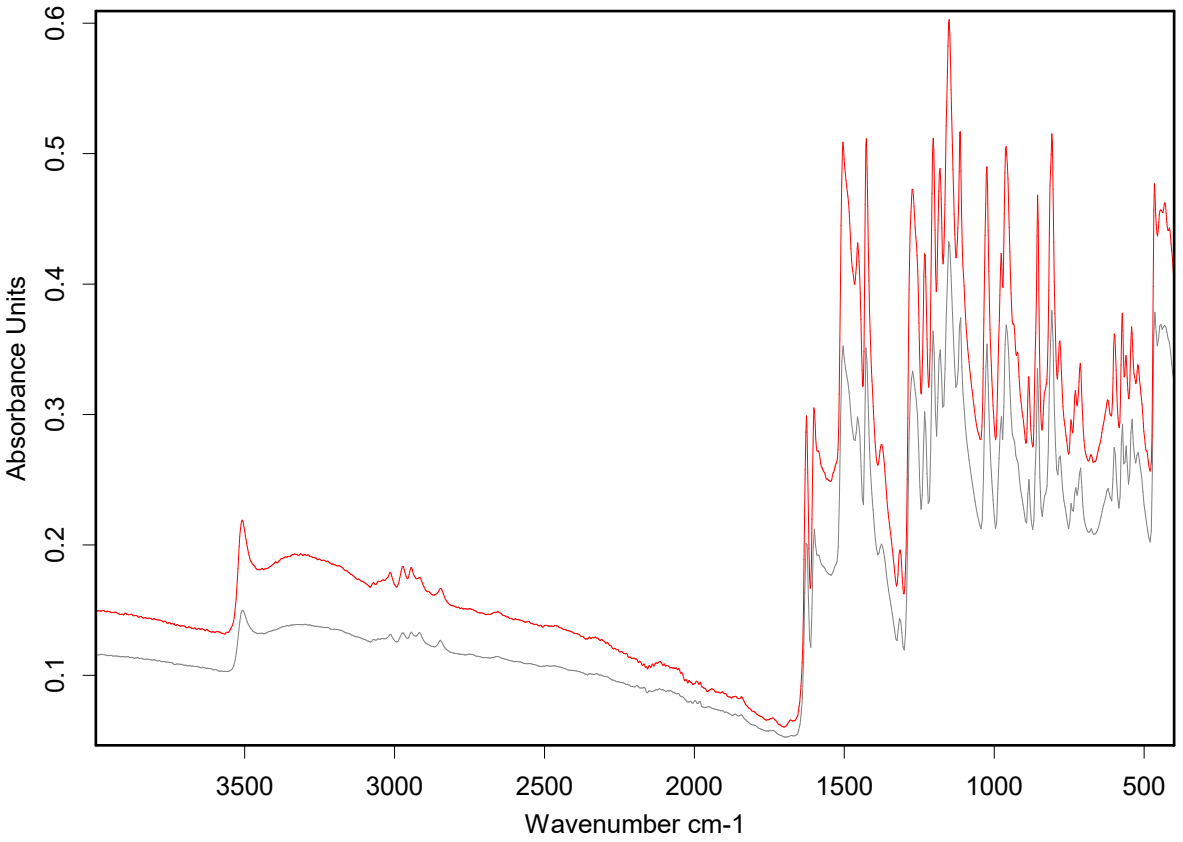

Product Number	ON 10072 DRM curcumin PE 95%- Turmeric 1
Entry No.	1704
Library name	ORIGIN STANDARDS LIBRARY.S01
Library description	
Copyright	

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

Color	File	Path	Spectrum Type
	118290-ON 10072 Curcumin PE 95% - Turmeric (56613).1	C:\Users\CTLA Admin\Documents\Bruker\OPUS_7.5.18\Data\MEAS	Query Spectrum

QUANZHOU LN BIOCHEMICAL CO.,LTD.
ADD: TAOXI VILLAGE, TAOCHENG TOWN, YONGCHUN COUNTY, QUANZHOU, CHINA
TEL: +86-595-23870659 FAX: +86-595-23870569
CELL: +86-13950178560 Zip Code: 362600

Certificate of Analysis

Product : Vitamin D3 Powder 100,000IU/g
Batch No. : 71230502
Quantity : 10,200 kg
Manufacture Date : May.02, 2023
Certificate Date : May.02, 2023
Expiration Date : May.01, 2026
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
Particle Size Distribution (Fineness) (U.S. standard sieves)	100% through No.40 mesh Min.90%through No.60 mesh Min.45%through No.100 mesh	100% through No.40 95%through No.60 88%through No.100	LN method
Vitamin D3 Content	Min.100.000 IU/g	106.720 IU/g	hplc/ep
Loss on Drying	Max 5.0%	3.6%	105℃ 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	≤0.3MPN/g	<0.3MPN/g	usp
E.Coli	Negative	Negative	usp
Salmonella	Negative	Negative	usp
Staphylococcus aureus	Negative	Negative	usp
Heavy metals	≤3ppm	1.1ppm	usp
As	≤0.5ppm	<0.01ppm	usp
Lead	≤0.5ppm	<0.05ppm	usp
Cadmium	≤0.1ppm	<0.005ppm	cns
Mercury	≤0.1ppm	<0.003ppm	usp
Chromium	≤0.5ppm	<0.2ppm	cns

Inspector: 刘阳珍 Approved: 刘细明

QUANZHOU LN BIOCHEMICAL CO.,LTD. QC

CTLA
Contract TESTING Laboratories
OF AMERICA

Certificate of Analysis

Sample Information

CTLA ID: 123006
Date Received: 12/17/2024
Sample Name: 10195 Vitamin D-3 100IU/mg (0.25%)
Lot Number: 57078
Customer: Origin Nutraceutical

Analysis	Method	MDL	Specification	Result	Units
ID, Rapid Complete Micro Combo					
ID	FTIR		Report	98.1	%
Total Aerobic Microbial Count (USP)	USP <2021>	100	Report	3,200	cfu/g
Total Coliforms (BAM) (MOD)	BAM CH.4 (MOD)	10	Report	<10	cfu/g
E. Coli BAM (MOD)	BAM CH. 4 (MOD)		Report	Absent	
Salmonella	USP <2022>		Report	Absent	
Staphylococcus aureus <2022>	USP <2022>		Report	Absent	
Rapid Yeast and Mold	AOAC 2014.05	10	Report	10	cfu/g
FTIR Spectra	FTIR		Report	Attached	
Vitamin D3 (Cholecalciferol)	HPLC		100	102.839	IU/mg

12/27/2024
DATE

Quality Manager

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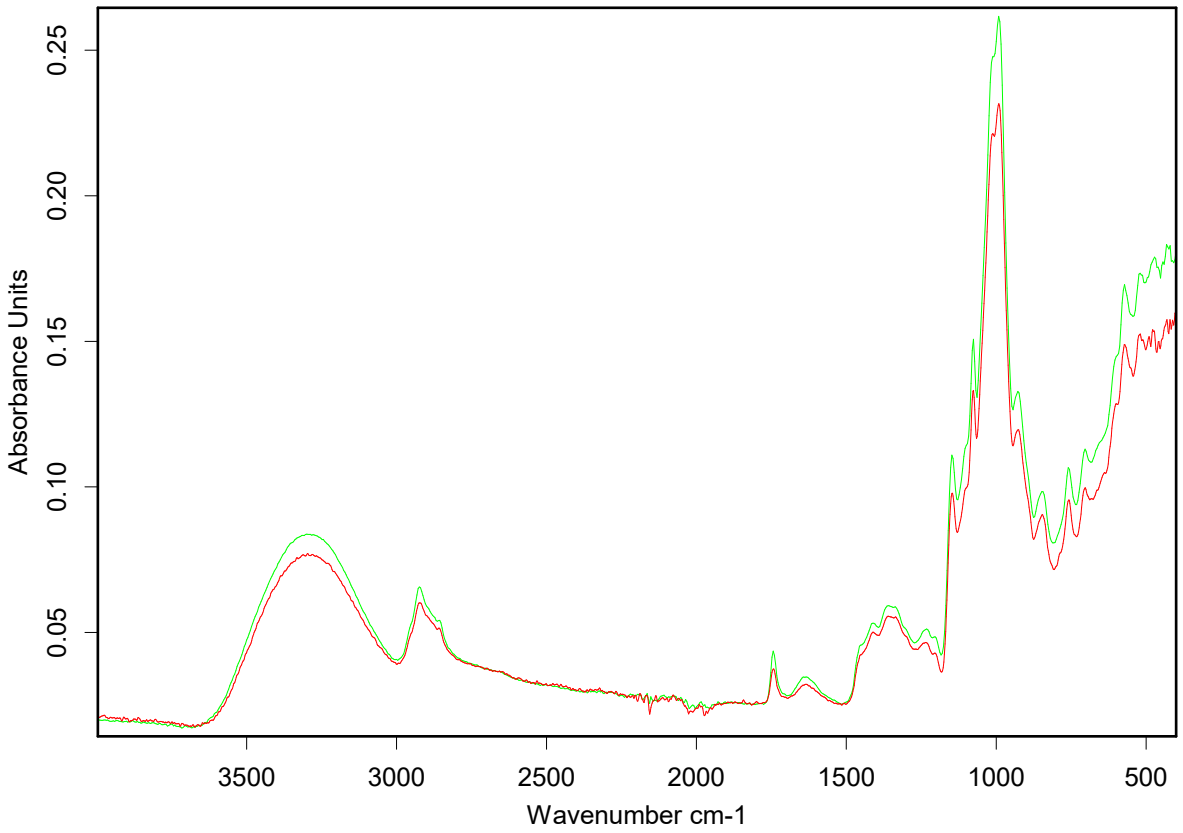

Product Number	ON 10195 DRM Vitamin D-3 100IU mg (0.25%
Entry No.	2944
Library name	ORIGIN STANDARDS LIBRARY.S01
Library description	
Copyright	

Color	Hit Quality	Compound name	CAS Number	Molecular formula	Molecular weight
	981	ON 10195 DRM Vitamin D-3 100IU mg (0.25%) (44903) Standard 3			

Color	File	Path	Spectrum Type
	123006-ON 10195 Vitamin D-3 100IU mg (0.25%) (57078).0	C:\Users\CTLA Admin\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: nutrilandgroupusa.com
Email: nutrilandgroup@outlook.com

Nutriland Group, Inc

Certificate of Analysis

Product:	Vitamin K_1 1% (Organic)		
Chemical Name:	Phytonadione or Phylloquinone		
Batch #:	231107		
Manufacturing Date:	Nov 2023	Retesting Date:	Nov 2026
Country of Origin:	China	Batch qty:	500kg
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%	1.40%	105°C, 2hrs
Carrier Used:	Maltodextrin, Arabic Gum	Conforms	
Heavy Metals:	<10 ppm	Conforms	USP
Arsenic:	<1 ppm	0.1ppm	USP
Cadmium:	<1 ppm	0.2ppm	USP
Lead:	<1 ppm	0.2ppm	USP
Mercury:	<0.1 ppm	0.001ppm	USP
Total Plate Count:	<250 cfu/g	100cfu/g	USP
Mold & Yeast:	<50 cfu/g	10cfu/g	USP
Coliforms:	<10 cfu/g	Negative	USP
E. Coli:	<10 cfu/g	Negative	USP
Salmonella:	Negative	Conforms	USP
Staphylococcus Aureus:	<10 cfu/g	Conforms	USP

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

Digitally Signed By QC Director:

CTLA Contract TESTING Laboratories OF AMERICA

Certificate of Analysis

Sample Information

CTLA ID: 121589
Date Received: 12/3/2024
Sample Name: 10210 Vitamin K-1 1%
Lot Number: 58635
Customer: Origin Nutraceutical

Analysis	Method	MDL	Specification	Result	Units
ID, Rapid Complete Micro Combo					
ID	FTIR		Report	97.6	%
Total Aerobic Microbial Count (USP)	USP <2021>	100	Report	<100	cfu/g
Total Coliforms (BAM) (MOD)	BAM CH.4 (MOD)	10	Report	<10	cfu/g
E. Coli BAM (MOD)	BAM CH. 4 (MOD)		Report	Absent	
Salmonella	USP <2022>		Report	Absent	
Staphylococcus aureus <2022>	USP <2022>		Report	Absent	
Rapid Yeast and Mold	AOAC 2014.05	10	Report	<10	cfu/g
Vitamin K1 (Phylloquinones)	HPLC	0.002	Report	1.120	%
FTIR Spectra	FTIR		Report	Attached	

12/11/2024
DATE

Quality Manager

Specifications provided by the Customer. Results with an asterisk (*) denote Specifications should be reviewed by the Customer.
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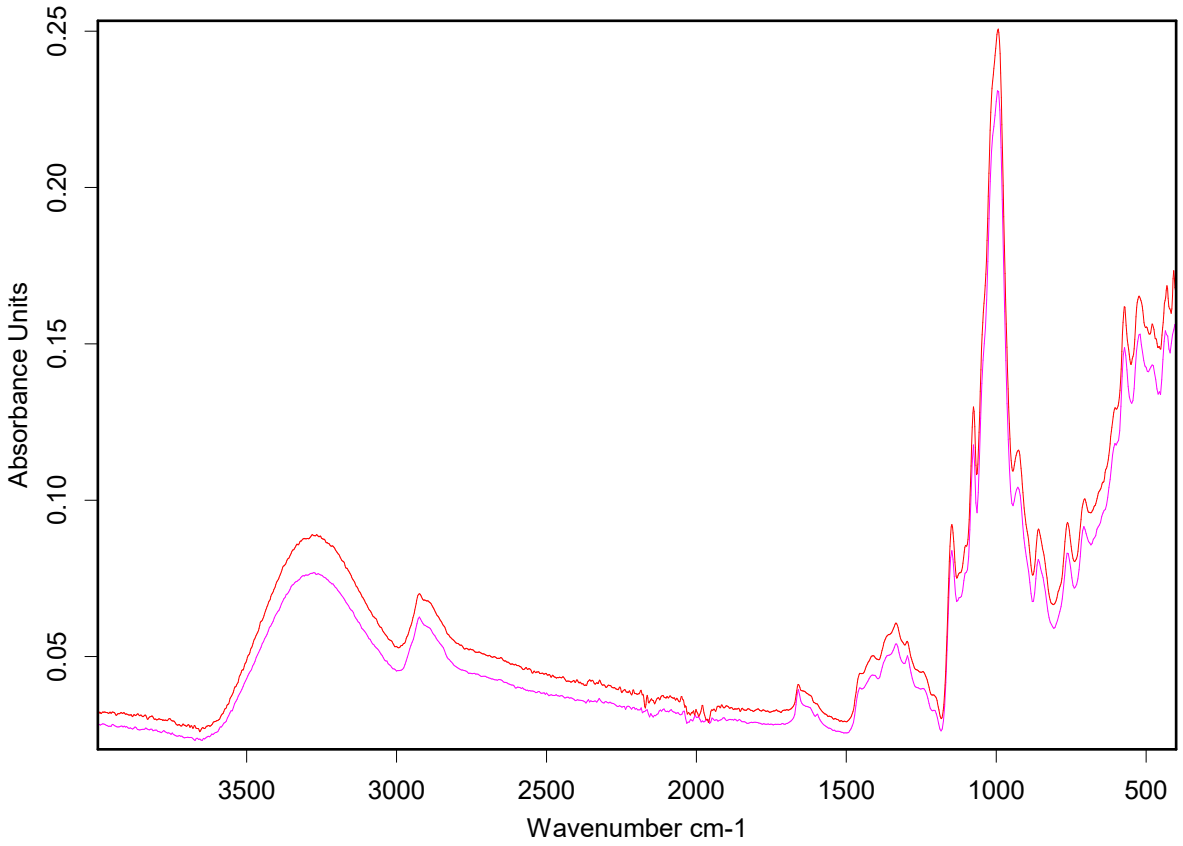


Product Number	ON 10210 DRM Vitamin K-1% (43033) Standa
Entry No.	2761
Library name	ORIGIN STANDARDS LIBRARY.S01
Library description	
Copyright	

Color	Hit Quality	Compound name	CAS Number	Molecular formula	Molecular weight
	976	ON 10210 DRM Vitamin K-1% (43033) Standard 3			

Color	File	Path	Spectrum Type
	121589-ON 10210 DRM Vitamin K-1 1% (58635).0	C:\Users\CTLA Admin\Documents\Bruker\OPUS_7.5.18\DATA\MEAS	Query Spectrum

FIFTH NUTRISUPPLY
Element of Your Success

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	OX0207B	**Manufacture Date**	July 02, 2024
Batch Quantity	649kgs	**Expiration Date**	July 01, 2026

Item	Specification	Result
Assay (HPLC,Menaquinone-7)	≥1.0%(>10000ug/g)	1.02%
Pharm.excipient($CaHPO_4$)	≥95.0%	95.4%
Identification	Yellow brown precipitate	Yellow brown precipitate
pH	7.0~8.0	7.7
Loss on drying	≤10%	6.5%
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℃ 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: Brandon Delgado **Date:** July 17, 2024

CTLA
Contract TESTING Laboratories
OF AMERICA

Certificate of Analysis

Sample Information

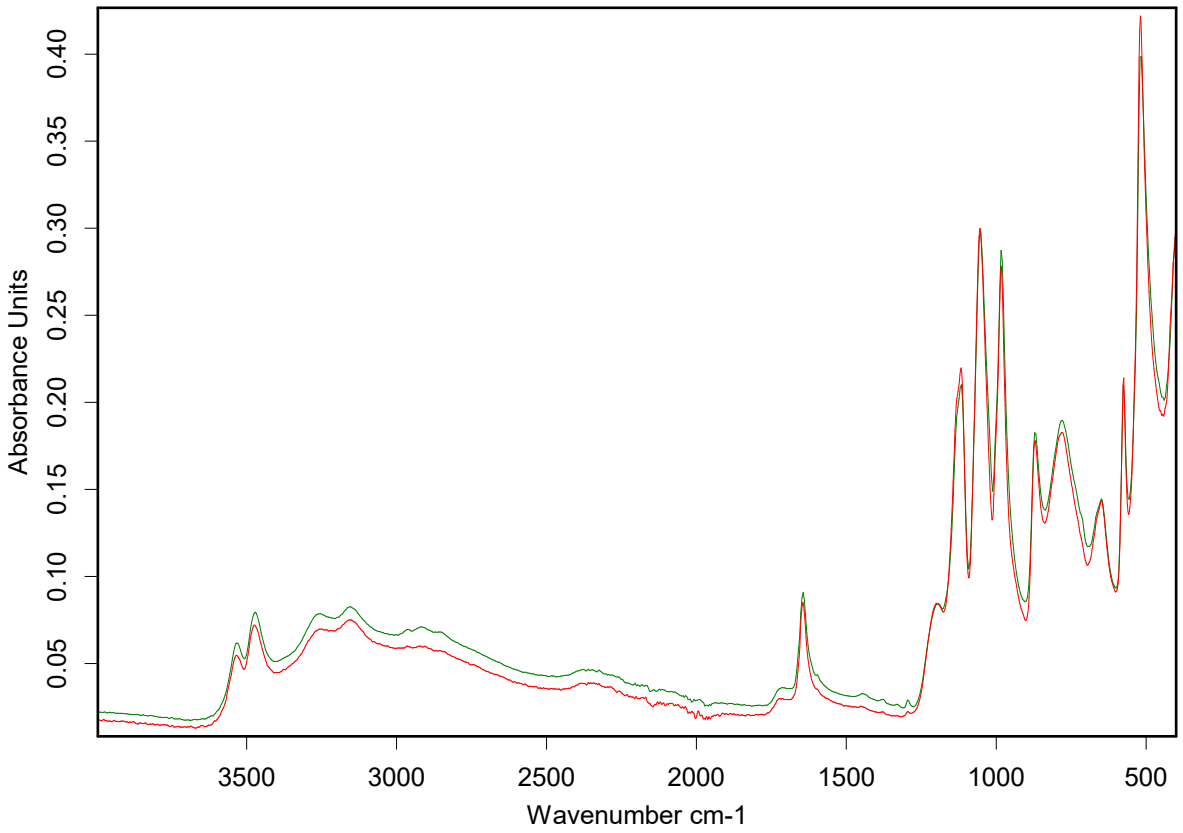
CTLA ID: 122127
Date Received: 12/9/2024
Sample Name: 10275 Vitamin K-1 1%
Lot Number: 57590
Customer: Origin Nutraceutical

Analysis	Method	MDL	Specification	Result	Units
ID, Rapid Complete Micro Combo					
ID	FTIR		Report	95.8	%
Total Aerobic Microbial Count (USP)	USP <2021>	100	Report	400	cfu/g
Total Coliforms (BAM) (MOD)	BAM CH.4 (MOD)	10	Report	<10	cfu/g
E. Coli BAM (MOD)	BAM CH. 4 (MOD)		Report	Absent	
Salmonella	USP <2022>		Report	Absent	
Staphylococcus aureus <2022>	USP <2022>		Report	Absent	
Rapid Yeast and Mold	AOAC 2014.05	10	Report	<10	cfu/g
FTIR Spectra	FTIR		Report	Attached	
Vitamin K2 (MK7)	HPLC	0.002	Report	1.085	%

12/18/2024
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. This document is not to be altered or reproduced except by the original authorizing body (CTLA)



Product Number	ON 10275 DRM Vitamin K-2 1% (MK7) (32830
Entry No.	2340
Library name	ORIGIN STANDARDS LIBRARY.S01
Library description	
Copyright	

Color	Hit Quality	Compound name	CAS Number	Molecular formula	Molecular weight
	958	ON 10275 DRM Vitamin K-2 1% (MK7) (32830) Standard 3			

Color	File	Path	Spectrum Type
	122127-ON 10275 Vitamin K-1 1% (57590).0	C:\Users\CTLA Admin\Documents\Bruker\OPUS_7.5.18\DATA\MEAS	Query Spectrum