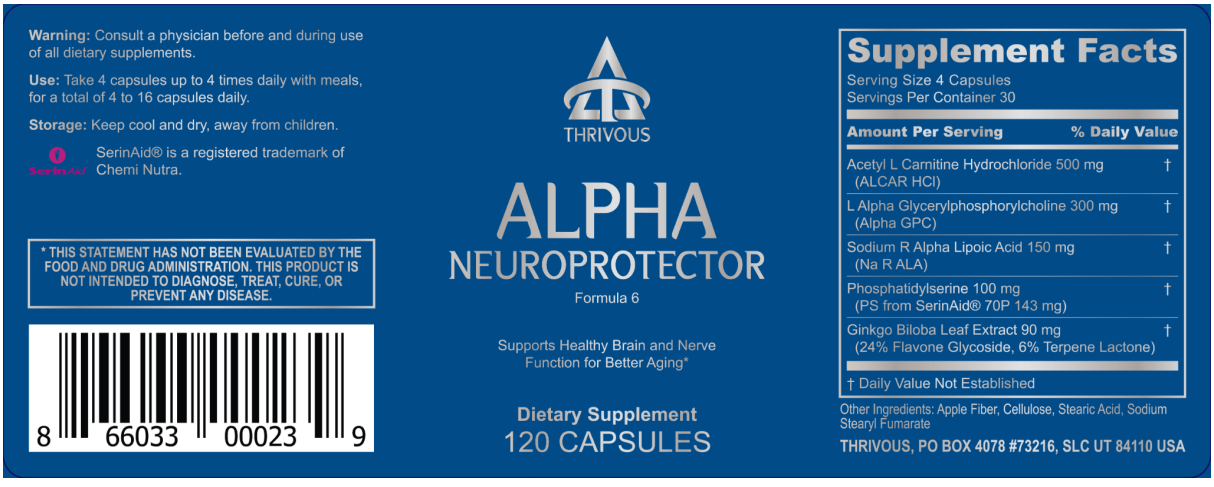
thrivous.com – support@thrivous.com – +1 801 658 9661 – PO Box 4078 #73216, SLC UT 84110 USA

CERTIFICATE OF ANALYSIS AND QUALITY

Product	Alpha Neuroprotector
SKU	ALPHA
Barcode	866033000239
Formula	6
Date	6 April 2023

Label



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 Apple Fiber Certificate of Analysis from Supplier
Excipient Apple Fiber 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
Excipient Stearic Acid Certificate of Analysis from Supplier
Excipient Stearic Acid Certificate of Analysis from Third-Party Testing
Acetyl L Carnitine Certificate of Analysis from Supplier
Acetyl L Carnitine Certificate of Analysis from Third-Party Testing
Alpha GPC Certificate of Analysis from Supplier
Alpha GPC Certificate of Analysis from Third-Party Testing
Ginkgo Biloba Certificate of Analysis from Supplier
Ginkgo Biloba Certificate of Analysis from Third-Party Testing
Phosphatidylserine Certificate of Analysis from Supplier

Phosphatidylserine Certificate of Analysis from Third-Party Testing
R Alpha Lipoic Acid Certificate of Analysis from Supplier
R Alpha Lipoic Acid Certificate of Analysis from Third-Party Testing

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

6 April 2023

RE: Letter of Guarantee for Thrivous Alpha Neuroprotector

To whom it may concern,

The undersigned, Lincoln Cannon LLC DBA Thrivous (“Thrivous”), hereby guarantees as follows regarding Alpha Neuroprotector (“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-2021-12022

GOOD MANUFACTURING PRACTICE CERTIFICATE

We hereby certify that ORIGIN NUTRACEUTICAL INC, located at, 151 E 3450 N, SPANISH FORK, UT 84660 is currently under inspection as a manufacturer of health food or dietary supplements. ORIGIN NUTRACEUTICAL INC 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 INC, 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

Division of Regulatory Services

State of Utah, County of Salt Lake.

On this date DEC 20 2021 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 MATHEWS
Notary Public - State of Utah
Comm. No. 708180
My Commission Expires on
Oct 1, 2023

350 North Redwood Road, PO Box 146500, Salt Lake City, UT 84114-6500
Telephone 801-982-2200 * facsimile 385-465-6023 * https://ag.utah.gov

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

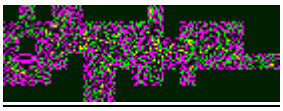
This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system
(as outlined by the joint ISO-ILAC-IAF Communiqué dated April 2017):

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:	*Issue Date:*	*Expiration Date:*
March 31, 2021	March 31, 2021	June 30, 2023

Accreditation No.:	*Certificate No.:*
102267	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.pjlabs.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	69344	**Sample Name**	30098 Alpha Neuroprotector
Customer	Thrivous	**Lot Number**	2305401
Date Received	3/6/2023	**Date Complete**	3/10/2023
Customer Address:	PO BOX 4078 #73216, Salt Lake City, Ut. 84110		

ANALYSIS	SPECIFICATION	RESULT	METHOD	MDL	UNITS
Complete Rapid Micro					
Total Plate Count	Report	300	USP<2021>	100	cfu/g
Total Coliforms	Report	<10	BAM CH.4	10	cfu/g
E. coli	Report	Absent	USP<2022>		
Salmonella	Report	Absent	USP<2022>		
S. aureus	Report	Absent	USP<2022>		
Rapid Yeast & Mold	Report	<10	AOAC 2014.05	10	cfu/g
Heavy Metal					
Arsenic	Report	0.019	USP <2232>	0.001	ppm
Cadmium	Report	<0.001	USP <2232>	0.001	ppm
Mercury	Report	<0.001	USP <2232>	0.001	ppm
Lead	Report	<0.001	USP <2232>	0.001	ppm
Acetyl L Carnitine Hydrocloride (ALCAR HCL)	Report	500	By Input		mg
L Alpha Glycerylphosphorylcholine (Alpha GPC)	Report	300	By Input		mg
Sodium R Alpha Lipoic Acid (Na R ALA)	Report	150	By Input		mg
Phosphatidylserine (PS from Serinaid ® 70P 143mg)	Report	100	By Input		mg
Ginkgo Biloba Leaf Extract (20% Flavone Glycoside, 6% Terpene Lactone)	Report	90	By Input		mg
Other ingredients: Apple Cider, Cellulose, Stearic Acid, Sodium Stearyl Fumarate					

COA Note:

Approved By:

Date: 3/10/2023

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 17025:2017 ACCREDITED LABORATORY

ISO 17025 Accreditation No: 102267

CTLA
Contract TESTING Laboratories
OF AMERICA

Certificate of Analysis

Sample Information

CTLA ID: 69344
Date Received: 3/6/2023
Sample Name: 30098 Alpha Neuroprotector
Lot Number: 2305401
Customer: Origin Nutraceutical

Analysis	Method	MDL	Specification	Result	Units
Rapid Complete Micro					
Total Plate Count	USP <2021>	100	Report	300	cfu/g
Total Coliforms	USP <2021>	10	Report	<10	cfu/g
E. coli	USP <2022>		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
Heavy Metals					
Arsenic	USP <233>	0.001	Report	0.019	ppm
Cadmium	USP <233>	0.001	Report	<0.001	ppm
Mercury	USP <233>	0.001	Report	<0.001	ppm
Lead	USP <233>	0.001	Report	<0.001	ppm
Amazon document fee			Report		

3/10/2023
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)

EMBOCAPS®
by SUHEUNG

ORIGINAL

CERTIFICATE OF ANALYSIS

Issued date : Jul. 05, 2022

Product Description Empty Hard Capsule From Hypromellose (HPMC)

Customer :	SUHEUNG-AMERICA	U.S.A	Manufacturing Date :	Jun. 07, 2022	
Capsule Type :	EMBO CAPS®	VG-PRO "Kosher and Halal Certified"	Expiration Date :	Jun. 06, 2027	
Capsule Item No. :	VP00A051A051		Quantity :	8,400,000 PCS	(120 Cartons)
Lot Number :	VP00A051A051 - 223115		Carton No. :	1 - 120	
Product Size :	00				
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	11.3 ~ 12.1	11.8	In-house Spec.
	Body	mm	19.8 ~ 20.6	20.3	In-house Spec.
Weight		mg	109.5 ~ 136.5	122.3	In-house Spec.
Identification of	Hypromellose*		Positive	Positive	USP/EP
Disintegration		min/sec	NMT 15	13'45"	USP/EP
Loss on Drying		%	3.0 ~ 7.0	4.7	USP/EP
Residue on Ignition (Ash)*		%	NMT 3.0	1.1	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	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.

Park 7/5

* ORDER NO. HC6764

Quality Assurance Manager

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

Contract Testing Laboratories of America
Email: cs@ctlatesting.com
Phone: (385) 477-4999
ISO/IEC 17025:2017 102267
FDA Registration #: 10849021016
DEA #:12170754-1714, 12170754-8915

Certificate of Analysis

Client Name: Origin Nutraceutical

Address: 151 E 3450 N
Spanish Fork, UT 84660

Date Recieved: 10/18/2022

Date Completed: 10/20/2022

COA Notes:

Sample ID: 65295

Sample Type:

Sample Name: 10344 CPS Capsule, HPMC, 00, Clear

Lot Number: 45226

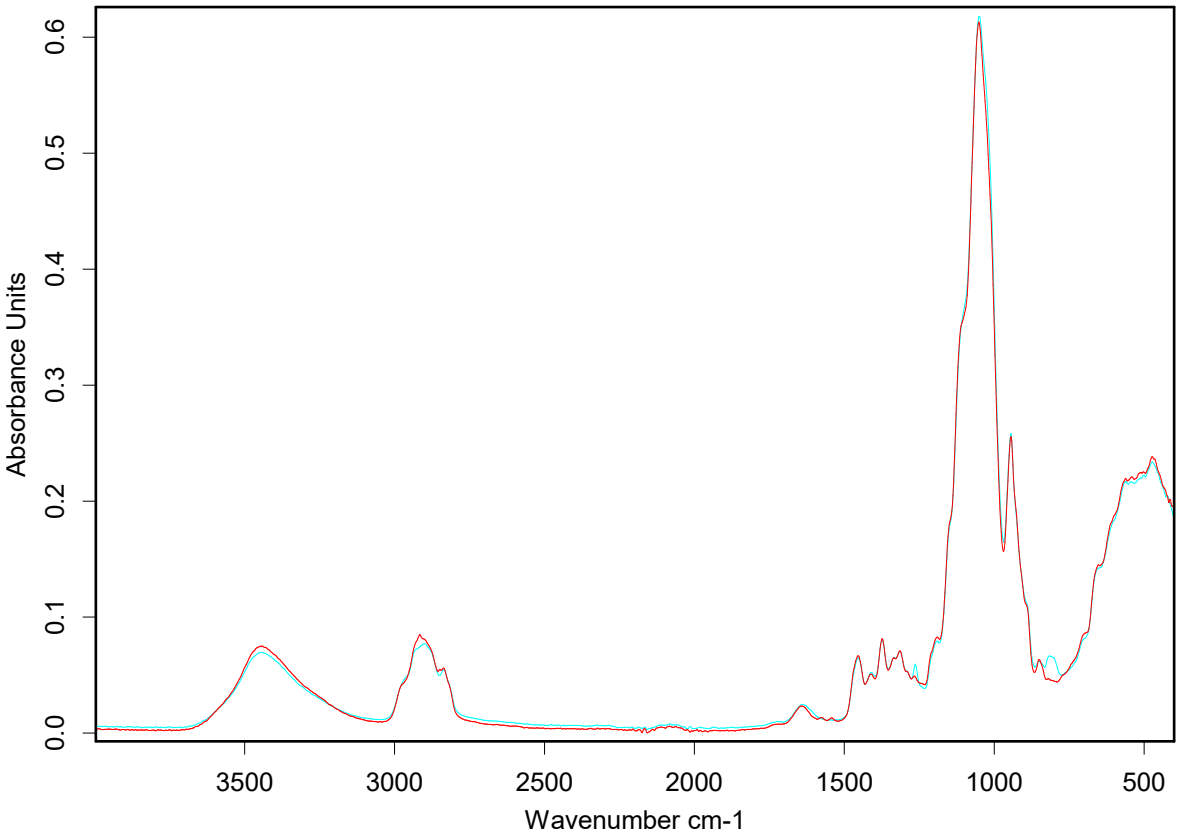
Chemistry Category

ID

Test	Method	MDL	Specification	Result	Units
ID	FTIR		Report	97.2	%

Brescia Eppley
Quality Assurance Specialist

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. OOS = Out of Specification. Alteration of this Certificate of Analysis is prohibited and will render the Certificate void. CTLA is the testing laboratory for the manufacturer. In case of product questions, please contact the manufacturer directly.



Product Number	ON 10344 CPS Capsule HPMC 00 Clear 25361
Entry No.	2026
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
	981	ON 10344 CPS Capsule HPMC 00 Clear 25361 Standard 2			

Color	File	Path	Spectrum Type
	65295-ON 10344 CPS Capsule HPMC 00 Clear (45226).0	C:\Users\CTLA Admin\Documents\Bruker\OPUS_7.5.18\Data\MEAS	Query Spectrum

FruitSmart™
Solutions. Naturally.

CERTIFICATE OF ANALYSIS

Product: Apple Fiber – 40 Mesh
Lot #: D002APFB2-40M
Pack Date: January 6, 2022
Expiration Date: January 6, 2024
Species/Genus: Malus Domestica
Part if Plant Used: Flesh of Fruit
Country of Origin: USA

ANALYTICAL	METHOD	RESULTS
Particle Size	U.S.A. Standard Testing Sieve	99.8% Thru 40 mesh screen
% Moisture	Moisture Analyzer	2.85%
Color & Appearance	Visual	Tan, in color
Water Activity (a_w)	Water Activity Meter	0.2390
Aerobic Plate Count (cfu/gram)***	AOAC Method 990.12	380 cfu/gram
Yeast (cfu/gram)***	AOAC Method 997.02	1,060 cfu/gram
Mold (cfu/gram)***	AOAC Method 997.02	<10 cfu/gram
Coliforms (cfu/gram)***	AOAC Method 991.14	<10 cfu/gram
E. Coli (cfu/gram)***	AOAC Method 991.14	Negative

***Micro results are the highest readings from 3 separate samples.

Packaging / Fill: 50 Lbs./Case

Reported By: *Maria Rangel*

CTLA
Contract TESTING Laboratories
OF AMERICA

Certificate of Analysis

Sample Information

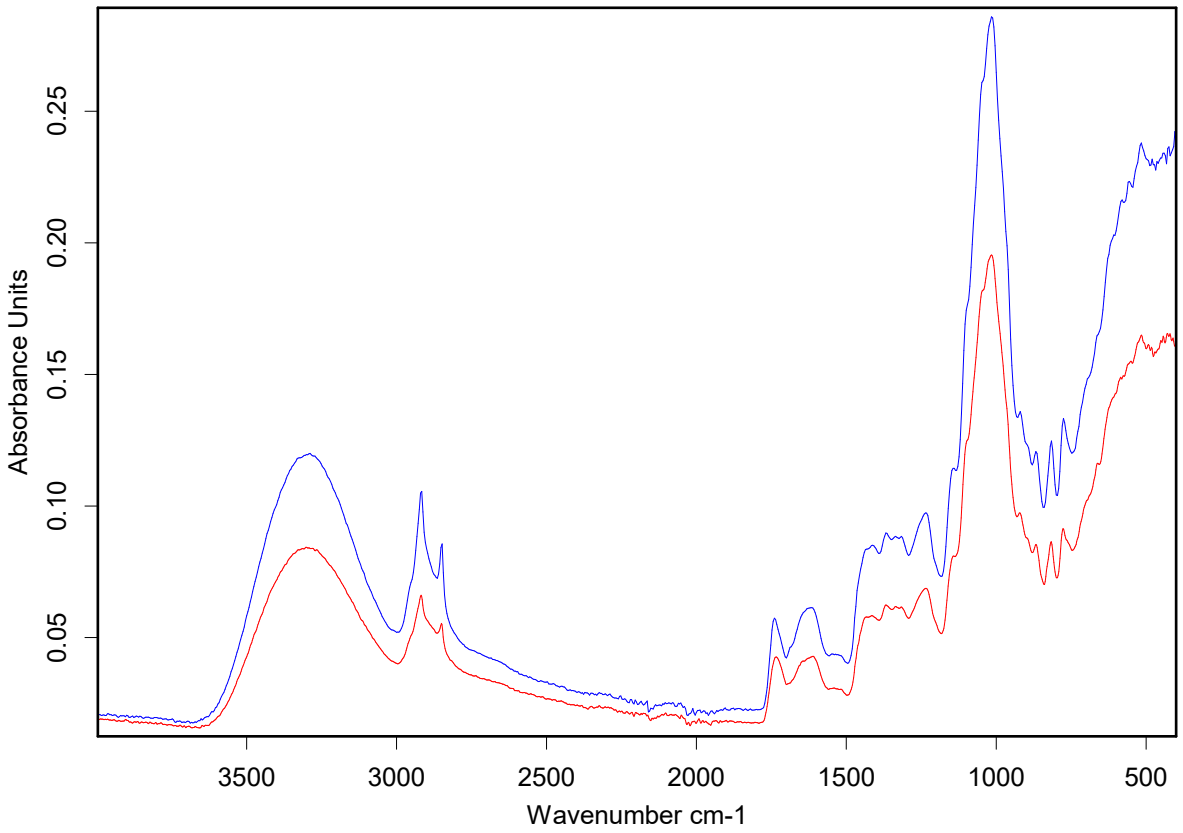
CTLA ID: 64708
Date Received: 12/22/2022
Sample Name: 10008 DRM Apple Fiber
Lot Number: 46420
Customer: Origin Nutraceutical

Analysis	Method	MDL	Specification	Result	Units
ID	FTIR		Report	97.8	%

12/29/2022
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	10008 Apple Fiber 62642 Standard 2
Entry No.	10
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
	978	10008 Apple Fiber 62642 Standard 2			

Color	File	Path	Spectrum Type
	64708-ON 10008 DRM Apple Fiber (46420).0	C:\Users\CTLA Admin\Documents\Bruker\OPUS_7.5.18\Data\MEAS	Query Spectrum

JRS PHARMA — The Global Excipient Maker — JRS FAMILY — A Member of the JRS Group

PRUV®

Sodium Stearyl Fumarate Ph. Eur., NF, JPE

CERTIFICATE OF ANALYSIS

Batch No.:	3059	Manufacturing Site:	Polanco, Spain
Re-evaluation date:	09/2024		
Manufacturing date:	09/2021		

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	144.8	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%	100.9 %	Ph. Eur., NF, JPE
Related substances (Ph. Eur.)	Largest single impurity max. 0.5%	0.3 %	Ph. Eur.
	Total Impurities max. 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]	Max. 2 ppm	< 2 ppm	JPE
Specific Surface Area (Blaine)	1.2 - 2.0 m^2/g	1.7 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	1.4 µm	JRS method
	d50: max. 20 µm	7 µm	JRS method
	d90: max. 45 µm	24 µm	JRS method

Zpruvp04

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

2021-12-02
Ref: JRS Pharma LP

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

CTLA
Contract TESTING Laboratories
OF AMERICA

Certificate of Analysis

Sample Information

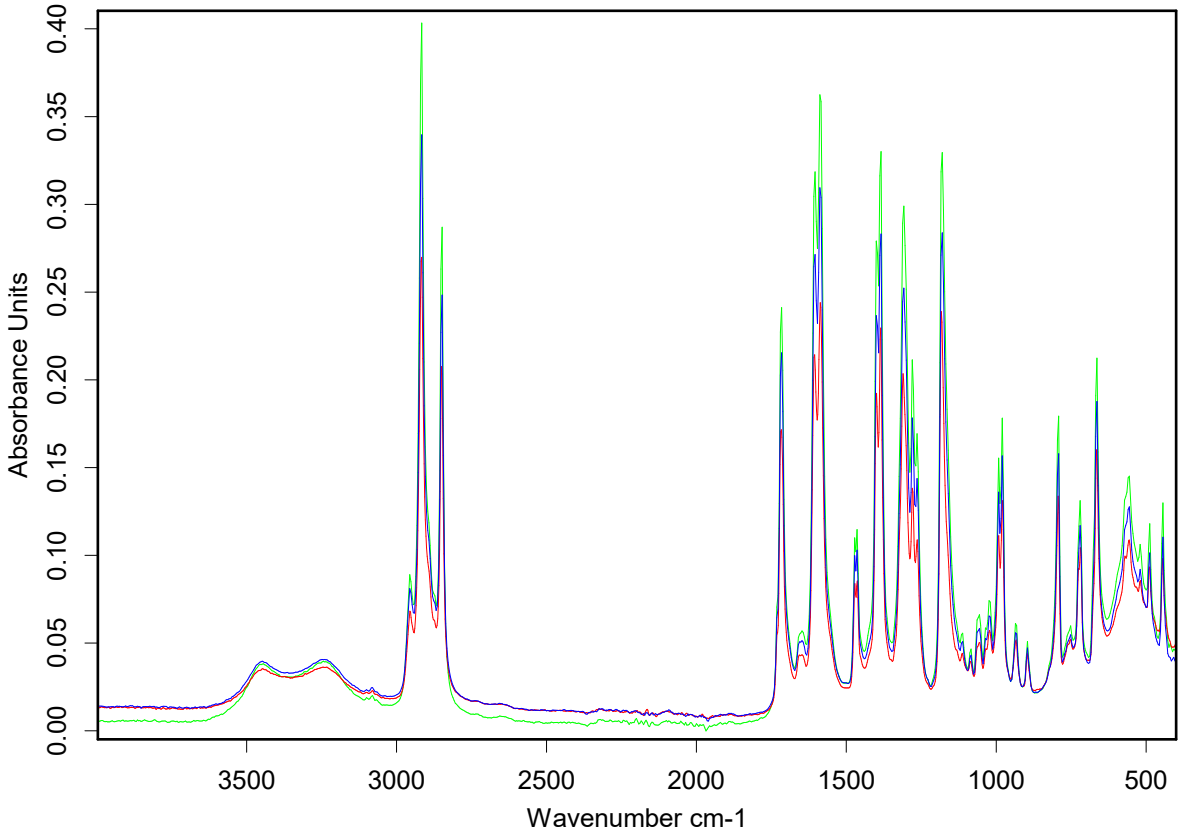
CTLA ID: 51336
Date Received: 4/27/2022
Sample Name: 10530 DRM Exc Pruv
Lot Number: 42358
Customer: Origin Nutraceutical

Analysis	Method	MDL	Specification	Result	Units
ID	FTIR		Report	94.10	%

4/29/2022
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	45341-ON 10530 DRM EXC PRUV 40701
Entry No.	238
Library name	COMPARISON TESTS.S01
Library description	Origin Nutraceutical
Copyright	Origin Nutraceutical Materials Only

Color	Hit Quality	Compound name	CAS Number	Molecular formula	Molecular weight
	962	45341-ON 10530 DRM EXC PRUV 40701			
	959	10530 PRUV 4862 Standard 2			

Color	File	Path	Spectrum Type
	51336-ON 10530 DRM EXC PRUV (42358).1	C:\Users\CTLA Admin\Documents\Bruker\OPUS_7.5.18\Data\MEAS	Query Spectrum

KONSEP TRADISI SDN BHD

No. 15 Jalan Anggerik Mokara 31/56, Kota Kemuning, 40460 Bandar Shah Alam,
Selangor Darul Ehsan, Malaysia.
Tel : 603-5121 0198/8198 Fax : 603-5122 3198

VIVION www.vivioninc.com

Proudly Supplied By: Vivion, Inc.
929 Bransten Road, San Carlos, CA 94070
Phone: (650) 595-3600, Fax: (650) 595-2094

100815
1218 - 2057
JG 12.19.18

DATE : 30/05/2018
PRODUCT : STEARIC ACID VEG NF PWD
QUANTITY : 20.0 METRIC TONS (1000 CARTON BOXES) P.O NO. : 15528
LOT NO. : 211805 15528 105 COUNTRY OF ORIGIN : MALAYSIA
MFG DATE : 21 MAY 2018 EXPIRE DATE : 20 MAY 2021
FDA - FOOD FACILITY REGISTRATION NO. 19375870600

CERTIFICATION OF ANALYSIS

We certified that we have analysed a composite sample of the above mentioned goods with the following results:

	NF Specification	Test Methods	Test Result
Identification			
A (Freezing Point)	To Pass Test	NF	Pass
B (Acid Value)	194 - 212	NF	208.6
C (Retention Time Peaks)	To Pass Test	NF	Pass
Residue on Ignition (%)	Not more than 0.1%	NF	<0.01
Heavy Metals ppm	Not more than 10 ppm	NF	<10
Lead ppm	1 ppm max		<1
Arsenic ppm	0.5 ppm max		<0.5
Mercury ppm	1 ppm max		<1
Fat and Fixed Oils, Iodine Value USP <401>	Not more than 4.0	NF	0.24
Color of Solution	Meets Requirements	NF	Pass
Acidity	Meets Requirements	NF	Pass
Freezing Point	53 - 59 Deg. C	NF	56.2
Residual Solvents	No Solvents Used		None
(NF Methods are described in the NF Monograph)			
Fatty Acid Composition in %		NF Method using USP Stearic Acid RS And USP Palmitic Acid RS	
C_{12}/ C_{14}	3 %	- / <0.1	
C_{16}	40 % Min	51.2	
C_{18}	40 % Min	48.4	
C_{20}	1 %	0.4	
Combination of C_{16} & C_{18} in not less than 90%			
Mesh size	**% Retained (Max)**	**% Retained**	
200 Mesh	70.0	46.0	
100 Mesh	10.0	8.0	
50 Mesh	0	0	

KONSEP TRADISI SDN BHD 468653-V

Major (Rtd) Foo Soo Nam
B.Sc. M.Sc Chemical Engineering
Quality Control Officer

KONSEP TRADISI SDN BHD

No. 15 Jalan Anggerik Mokara 31/56, Kota Kemuning, 40460 Bandar Shah Alam,
Selangor Darul Ehsan, Malaysia.
Tel : 603-5121 0198/8198 Fax : 603-5122 3198

DATE : 30/05/2018
PRODUCT : STEARIC ACID VEG NF PWD
QUANTITY : 20.0 METRIC TONS (1000 CARTON BOXES) P.O NO. : 15528
LOT NO. : 211805 15528 105 COUNTRY OF ORIGIN : MALAYSIA
MFG DATE : 21 MAY 2018 EXPIRE DATE : 20 MAY 2021
FDA - FOOD FACILITY REGISTRATION NO. 19375870600

CERTIFICATION OF ANALYSIS

We certified that we have analysed a composite sample of the above mentioned goods with the following results:

	Methods	Test Result
Total Plate Count cfu/g	FDA/BAM	< 10
Mould & Yeast cfu/g	FDA/BAM	< 10
E. Coli	FDA/BAM	Absent
Salmonella in 25g	FDA/BAM	Absent
Staphylococcus aureus	FDA/BAM	Absent
Coliform	FDA/BAM	Absent

Major (Rtd) Foo See Nam
Cert. M.Sc Chemical Engineering
Quality Control Officer

CTLA
Contract TESTING Laboratories
OF AMERICA

Certificate of Analysis

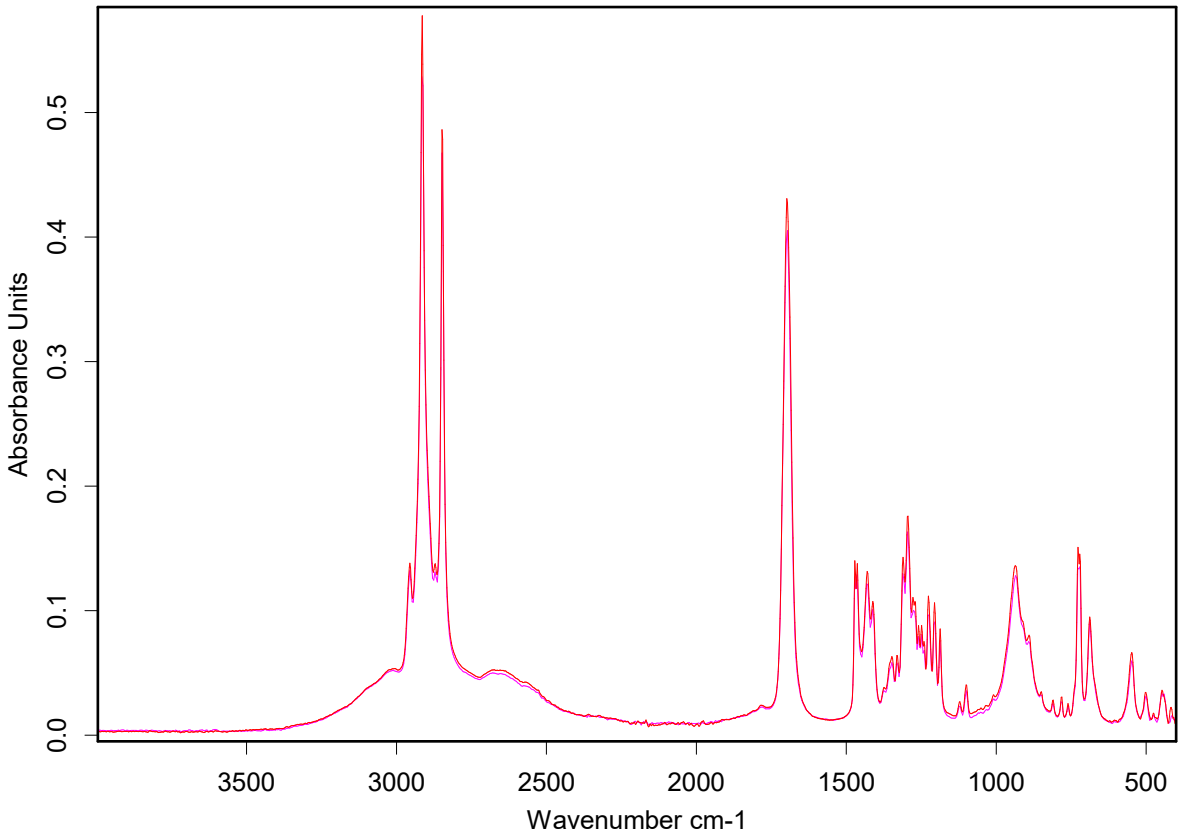
Sample Information

CTLA ID: 6995
Date Received: 3/19/2019
Sample Name: 10050 Stearic Acid Vegetable
Lot Number: 14205
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
E. Coli	USP <2022>		Report	Negative	
Salmonella	USP <2022>		Report	Negative	
Staph. aureus	USP <2022>		Report	Negative	
Rapid Yeast and Mold	AOAC 997.02	10	Report	<10	cfu/g

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 = Machine Detection Limit.



Product Number	10050 Stearic Acid Vegetable 4266 Standard 2
Entry No.	807
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
	983	10050 Stearic Acid Vegetable 4266 Standard 2			

Color	File	Path	Spectrum Type
	6995-10050 DRM Stearic Acid Vegetable (Halal) 14205.0	C:\Users\Israel\Documents\Bruker\OPUS_7.5.18\Data\MEAS	Query Spectrum

Origin Nutraceutical	**EXPIRATION DATE EXTENSION**	Version: 2.0 Date Revised: 12/16/21 Revision Number: 1
Document Number: **ORN-FRM2-045-02**		Page 1 of 1
Author: K. Mayne Date 12/16/21	Dept. Approved Signature: Date 12/16/21	QC Approval Signature: Date 12/16/21

Origin Information

Origin Part Number	10050
Origin Product Name	EXC Stearic Acid
Origin Lot Number	14205

Refer to flow chart in ORN-FLW1-045

Identification

Date Received:	3/18/2019	Expiration Date on CoA:	5/20/2021
Supplier:	Vivion	Expiry interval on CoA: 6 months ☐	
Supplier Lot #:	21865155281105	1 yr. ☐ 2 yr. ☐ 3 yr. ☒	Other:____

Analysis

	Specification	Pass/Fail	Test Date	Initial
Micro Test Results^:	<100	(P)/F/na	3/19/2019	DL
Active Test Results*:	NA	P/F/(na)	NA	DL
Flavor (flavors only)	NA	P/F/(na)	NA	DL
Color	white	(P)/F/na	3/8/22	DL
Odor	Normal	(P)/F/na	3/8/22	DL
Apperance	Normal	(P)/F/na	3/8/22	DL

*Active Test not required if there is no active in the material or no active content claim made on the label.
^Microbial Test not required if original test total plate count was <10,000 CFU/g.

Overall Results

PASS ☒ FAIL ☐

If PASS*, use expiry interval on CoA to determine new expiration date: 3/8/25.

If fail, QC meet with management to determine whether to dispose (Destruction Request ORN-FRM1-045).

QC Enter new Expiration Date in Infinity: DL
QC print new label for item: DL
QC attach this form to paperwork: DL
WH places new label on item: AT

***Justification for Extension: If PASS, the applicable tests show the active content is still 95+% (if an active is present and testable), there is no microbial contamination, and there has been no significant change in the flavor, color or texture of the ingredient. Since all applicable tests have passed showing the material has not degraded, the expiration date of the product can be extended based on the expiry interval of the original CoA, which is listed above. Finished product must pass microbial testing.**

黄冈华阳药业有限公司
Huanggang Huayang Pharmaceutical Co., Ltd.

☆KOSHER

Certificate of Analysis

Product Name	Acetyl-L-Carnitine HCL	Check Foundation	In-house Standard
Batch Quantity	1500kgs	Batch No	ALC20110701
Package	25kg/drum	Manufacturing Date	NOV 07, 2020
Checking Date	NOV 07, 2021	Retesting Date	NOV 06, 2023

Check Item	Specification	Methods	Check Results
Identification	In accordance with the IR absorption spectrum of the standard	IR	Conform
Appearance	White Crystalline Powder	Visual	Conform
Particle size (mesh)	Through 20mesh	20 Mesh Screen	100% passed
Specific Rotation	-27.0~-29.0°	USP	-28.1°
PH	2.3~2.6	USP	2.4
Loss on drying	≤0.50%	USP	0.09%
Residue on ignition	≤0.50%	USP	0.07%
Assay	98.0%~101.0%	Titration	99.8%
Heavy metal	≤10ppm	USP	<10ppm
Lead （Pb）	≤3ppm	USP	<3ppm
Cadmium (Cd)	≤1ppm	USP	<1ppm
Mercury （Hg）	≤0.1ppm	USP	<0.1ppm
Arsenic (As)	≤1ppm	USP	<1ppm
TPC	≤1000Cfu/g	USP	< 10Cfu/g
Yeast & Mold	≤100Cfu/g	USP	< 10Cfu/g
E.Coli	Negative	USP	Negative
Salmonella	Negative	USP	Negative
Bulk density	0.3-0.7 g/ml	Physical	Conform
Tapped density	0.5- 0.9 g/ml	Physical	Conform
Conclusion: Comply with In-house Standard			
Tester:		Auditor:	

Add: 8 Wangu RD, Sanlifan Town, Luotian County, Hubei 438621, China
Tel: 86 713 5811489 Fax: 86 713 5811628
www. huayangbio.com Email: stanly@huayangbio.com

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Certificate of Analysis

Sample Information

CTLA ID:	68736
Date Received:	2/24/2023
Sample Name:	10276 N-Acetyl-Carnitine HCl (ALCAR)
Lot Number:	41818/46052
Customer:	Origin Nutraceutical

Analysis	Method	MDL	Specification	Result	Units
Rapid Complete Micro					
Total Plate Count	USP <2021>	100	Report	<100	cfu/g
Total Coliforms	USP <2021>	10	Report	<10	cfu/g
E. coli	USP <2022>		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

2/28/2023
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)

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Certificate of Analysis

Sample Information

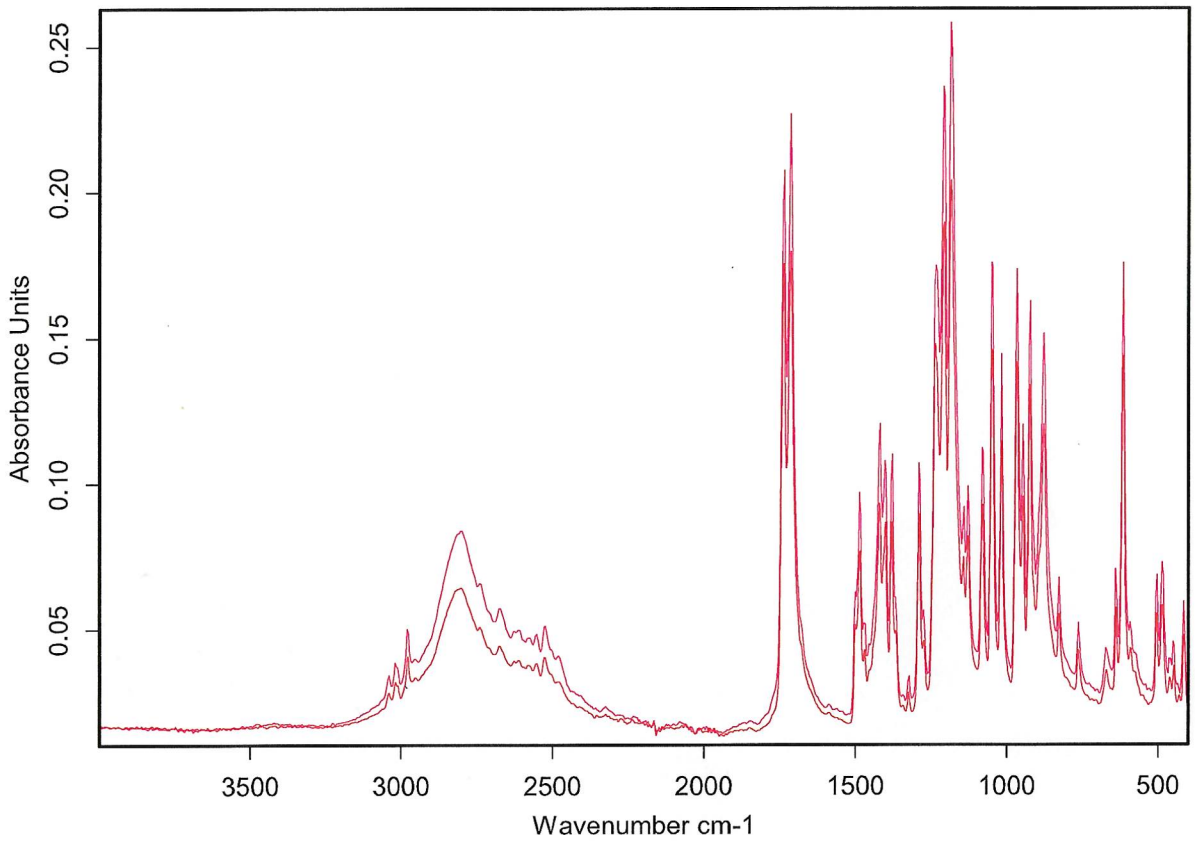
CTLA ID:	65722
Date Received:	1/9/2023
Sample Name:	10276 N-Acetyl-L-Carnitine HCl (ALCAR)
Lot Number:	41818 / 46052
Customer:	Origin Nutraceutical

Analysis	Method	MDL	Specification	Result	Units
N-Acetyl-L-Carnitine	HPLC	0.002	Report	94.230	g/100g

1/24/2023
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	10276 NAI Carnitine Standard
Entry No.	156
Library name	RM TEST.S01
Library description	Testing of Raw Materials
Copyright	User library

Color	Hit Quality	Compound name	CAS Number	Molecular formula	Molecular weight
	970	10276 NAI Carnitine Standard			

Color	File	Path	Spectrum Type
	49330-ON DRM N-Acetyl- L-Carnitine HCl (ALCAR) (41818)	C:\Users\CTLA Admin\Documents\Bruker\OPUS_7.5.18\Data\MEAS	Query Spectrum

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E-mail:info@cimasci.com

Certificate of Analysis

Product and Batch Information			
Product Name	Choline Alfoscerate Powder	**Country of Origin**	P.R. China
CAS No.	28319-77-9	**Molecular Weight**	257
Molecular Formular	$C_8H_{20}NO_6P$	**Batch**	CS-GPCP-210205
Manufacture Date	Feb 05, 2021.	**Analysis Date**	Feb 05, 2021.
Report Date	Feb 08, 2021.	**Expired Date**	Feb 04, 2023.

Item	Specification	Result	Test Method
Active Ingredient			
Assay(%,On Dried Base)	98.5%~102.0%	99.95%	KPC
Physical Control			
Appearance	Fine Powder with highly Hygroscopic	Complies	Visual
Color	White to light yellow	Complies	Visual
Odor	Neutral	Complies	Organoleptic
Identification	The R value of the sample and STD should be same.	Complies	TLC
Specification Rotation[a]$^{25}_{D}$	-2.4° to -2.8°	-2.69°	KPC
Solubility(H_2O,10%W/W)	Clear	Complies	Visual
Color of Solution	NMT Y7	Complies	KPC
Water	1.0% Max	0.36%	K.F.
Ph(10% GPC Solution,w/v)	5.0-7.0	6.0	KPC
Chemical Control			
Heavy Metals	NMT10PPM	Conforms	CPh
Sulfate(SO4)	NMT 0.020%	Conforms	CPh
Iron(Fe)	NMT10PPM	Conforms	CPh
Chloride(Cl)	NMT 0.020%	Conforms	CPh
Phosphate Ion(P)	The color of the sample is not darker than that of reference.	Conforms	KPC
Solvent Residual	Meeting USP Standard	Conforms	GC
Related Substance	Total impurites:NMT2.0%	Conforms	KPC
	Single impurity:NMT0.5%	Conforms	KPC
Packing and Storage			
Packing	Pack in paper-drums and Aluminum foil lined-bags inside. 25Kg/Drum		
Storage	Store in a well-closed container away from moisture and direct sunlight.		
Shelf Life	2 years if sealed and stored properly.		

QC:

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Sample Information

CTLA ID: 29093
Date Received: 3/18/2021
Sample Name: 11023 aGPC 99%
Lot Number: 34114
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
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
Alpha glycerylphosphorylcholine	HPLC	.01	>=99	99.3	%
FTIR Spectra	FTIR		Report	Attached	

4/9/2021
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.

Certificate of Analysis

Sample Information

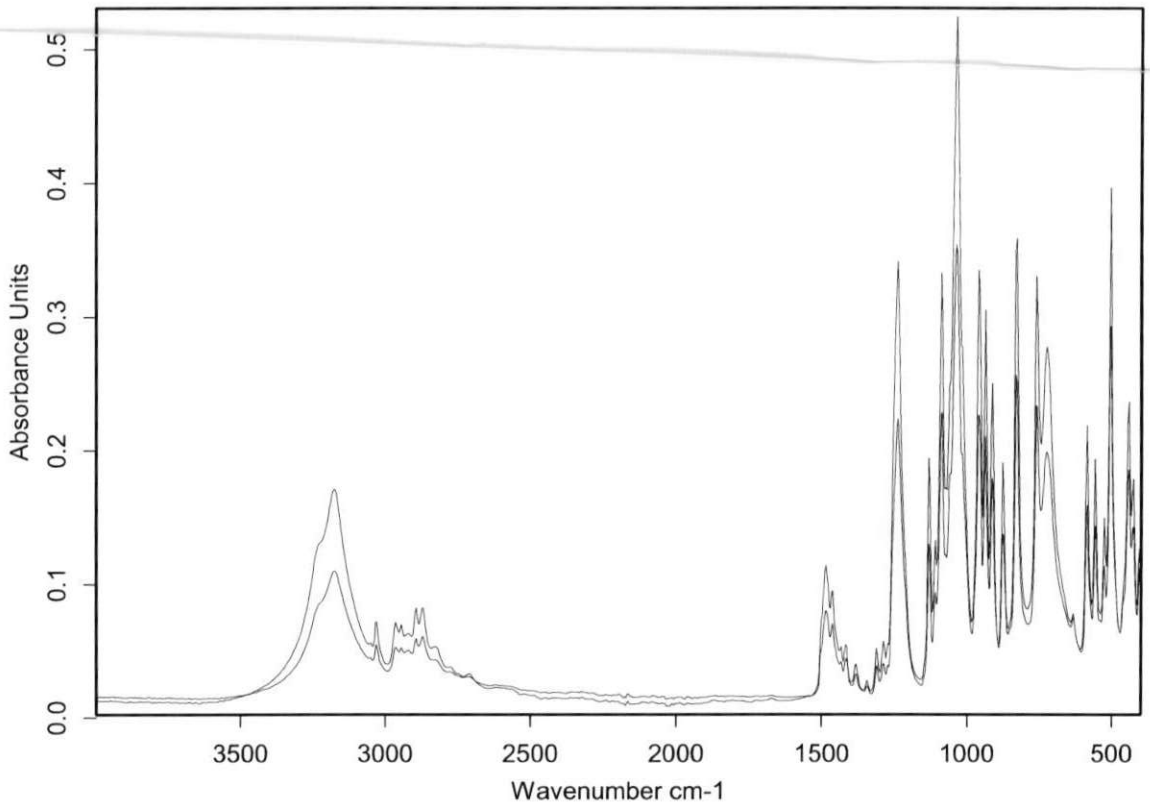
CTLA ID:	65723
Date Received:	1/9/2023
Sample Name:	11023 L-Alpha Glycerylphosphoryl Choline
Lot Number:	34114
Customer:	Origin Nutraceutical

Analysis	Method	MDL	Specification	Result	Units
Alpha glycerylphosphorylcholine	HPLC	0.002	Report	98.059	g/100g

1/23/2023
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 11023 DRM aGPC 99% 34114 Standard 1
Entry No.	2413
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
	957	ON 11023 DRM aGPC 99% 34114 Standard 1			

Color	File	Path	Spectrum Type
	29093-ON 11023 DRM aGPC 99% 34114.0	C:\Users\Israel\Documents\Bruker\OPUS_7.5.18\Data\MEAS	Query Spectrum

Herb Green Health
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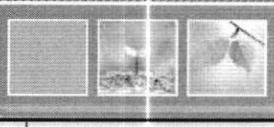
Certificate of Analysis



Product Name	Ginkgo Biloba Extract	**Sample Quantity**	1362.8kg
Latin Name	*Ginkgo Biloba* L.	**Botanical part used**	Dried leaves
Extract solvent	Ethanol&Water	**Carrier**	None
Batch No.	20181202	**Extract ratio**	50:1
Manufacturing Date	2018-12-18	**Sampling date**	2018-12-20
Expiry Date	2021-12-17	**Report Date**	2018-12-27
Country of Origin	China	**Specification**	TS3-C110201-03-00-B

Test Items		Specifications	Test Results	Test Method
Character	Appearance	It should be light brown yellow to tan powder .Little bitter.	Complied	Organoleptic
Identification	TLC	Have to comply	Complied	ChP<0502>
	Fingerprint	Have to comply	Complied	HPLC
	HPLC	Q/K NLT 0.8-1.2	1.09	ChP<0512>
	HPLC	I/Q NLT 0.15	0.31	ChP<0512>
Content	Total flavone glycosides, %	22.0-27.0 (Calculated as flavonol glycosides , Q+K+I, on the dried basis)	24.2（10.89+9.96+3.35）	ChP<0512>
	Terpene lactones, %	5.4-12 (Calculated as Terpene lactones, on the dried basis)	8.31 （3.31+2.21+1.18+1.61）	ChP<0512>
		2.6-5.8 Bilobalides	3.31	
		2.8-6.2 Ginkgolides A+B+C	5.00	
	Ginkgolic acids, ppm	NMT 5.0	1.05	ChP<0512>
Test	Loss on drying, %	NMT 5.0	2.04	ChP<0831>
	Particle size(80mesh sieve), %	95	99.63	Ch.P<0982>
	Bulk density, g/mL	0.45-0.55	0.46	Enterprise method
	Rutin, %	NMT 3.0	2.03	ChP<0512>
	Free Quercetin, %	NMT 0.3	0.11	ChP<0512>
	Sophoricoside, ppm	NMT 300	Complied	ChP<0512>
Heavy metal	Heavy metal, mg/kg	NMT 20	Complied	Ch.P<0821>
Pesticide residue	Pesticide residue	USP<561>	Complied	Test by External Lab
Solvent residue	Ethanol, ppm	NMT 1000	Complied	ChP<0861>
	Methanol, ppm	NMT 10	Complied	ChP<0861>
Other limited	PAHs, ppb	NMT 50	Complied	Test by External Lab
	BaP, ppb	NMT 10	Complied	Test by External Lab
	Total aerobic bacteria count, cfu/g	NMT 1000	<10	ChP<1105>

地址：中国江西省赣州市宁都县水东工业园莲花南路 Address：Lianhua South Road, Ningdu Industrial Zone, Ganzhou, Jiangxi, P.R.C
电话（TEL）：0086-574-87432602，87432606 邮编（Postcode）:5342800 传真（FAX）：0574-87432605

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Certificate of Analysis

Microbial limits	Total molds and yeasts count, cfu/g	NMT 100	<10	ChP<1105>
	E. coli, /g	Absent	ND	ChP<1106>
	Salmonella, /g	Absent	ND	ChP<1106>
Conclusion: The test results conform to the manufacture's standard.				
Storage: Preserve in room temperature, sealed place, keep away from light.				
Shelf life: 3 years.				
Note: This product is non-GMO, non-irradiation, non- ETO, TSE / BSE free.				
Analyst: Liu Ying			**Recheck:** Zhang Lizhen	
Approved: Guan Lanfang			**Issue date:** 2018-12-27	

地址：中国江西省赣州市宁都县水东工业园莲花南路 Address：Lianhua South Road, Ningdu Industrial Zone, Ganzhou, Jiangxi, P.R.C
电话（TEL）：0086-574-87432602，87432606 邮编（Postcode）:5342800 传真（FAX）：0574-87432605

Contract **TESTING** Laboratories
OF AMERICA

Certificate of Analysis

Sample Information

CTLA ID: 13263
Date Received: 12/12/2019
Sample Name: 10322 Ginkgo Biloba Leaf PE 24/6
Lot Number: 21010
Customer: Origin Nutraceutical

Analysis	Method	MDL	Specification	Result	Units
D, 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
Escherichia coli	USP <2022>		Report	Negative	
Salmonella	USP <2022>		Report	Negative	
Staphylococcus aureus	USP <2022>		Report	Negative	
Rapid Yeast and Mold	AOAC 997.02	10	Report	<10	cfu/g
HPTLC	HPTLC		Report	Characteristic	
Ginkgoflavone Glycosides	HPLC		Report	24.35	%
Ginkgo Terpene Lactones	HPLC		Report	6.113	%

12/23/2019
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

Certificate of Analysis

Sample Information

CTLA ID:	65517
Date Received:	1/5/2023
Sample Name:	10322 Gingko Biloba Leaf PE 24/6
Lot Number:	21010
Customer:	Origin Nutraceutical

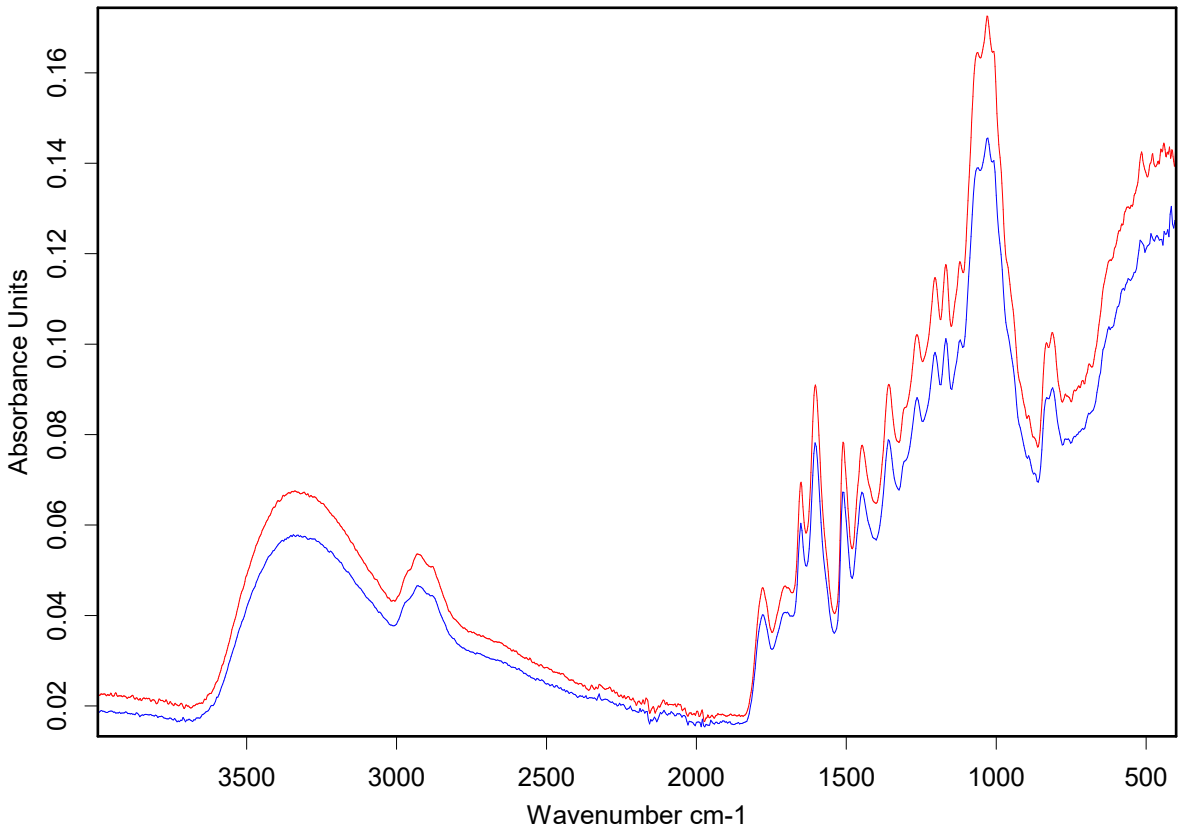
Analysis	Method	MDL	Specification	Result	Units
ID	FTIR		Report	96.8	%
FTIR Spectra	FTIR		Report		
Ginkgo flavone Glycosides	HPLC	0.002	24	25.8	%
Ginkgo Terpene Lactones	HPLC	0.002	6	7.3	%

Amended Report: added tests

1/26/2023
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 10322 Ginkgo Biloga Leaf Pe 2416 (21010
Entry No.	1846
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
	979	ON 10322 Ginkgo Biloga Leaf Pe 2416 (21010) Standard 2			

Color	File	Path	Spectrum Type
	29414-ON 10322 Ginko Biloba 21010.0	C:\Users\Israel\Documents\Bruker\OPUS_7.5.18\Data\MEAS	Query Spectrum

1055 S. 1675 W
Orem, UT 84059
USA

12661 Hoover Street
Garden Grove, CA 92841
714-754-HERB (4372)
714-668-9972 (FAX)
Sales@Alkemist.com
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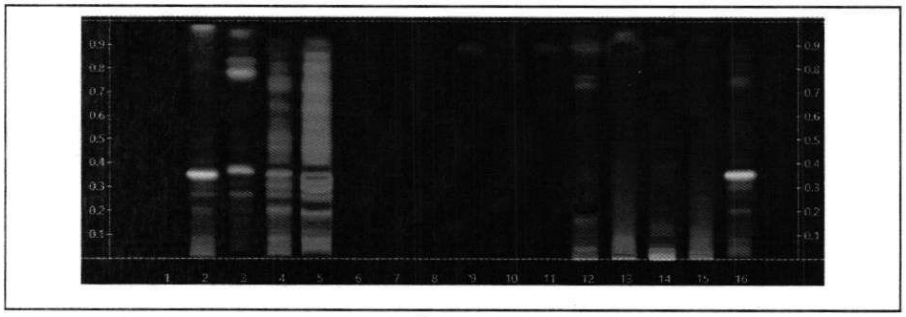
Certificate of Analysis: CTLA 13263 (CTLA 13263)

High Performance Thin-Layer Chromatography with Photo-Documentation

1



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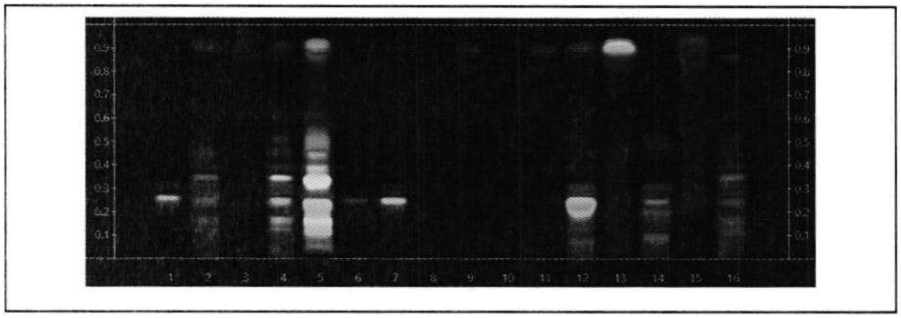

Company Name:	CTLA	**Sample Received:**	12/16/19
Title:	CTLA 13263	**Form of Botanical:**	crude plant powder
Plant Part:	Leaf	**Lot Number:**	(CTLA 13263) →Lanes 4(0.5µl), 5(3µl)
Appearance:	Fine tan powder	**Sample:**	19350MJN_1
Sample Packaging:	Clear Whirl-Pak		

Latin Name: *Ginkgo biloba* L. [Ginkgoaceae]

Reference Sample: Lane 2(3µl) (X15209CRB), Lane 3(1.5µl) (X15209CRB) Ginkgo biloba (leaf); Lane 12(3µl) (AGK02609SWH1), Lane 13(1.5µl) (AGK02609SWH1) Sophora japonica (flower); Lane 14(3µl) (AGK02609SWH2), Lane 15(1.5µl) (AGK02609SWH2) Sophora japonica (fruit); held at Alkemist Labs, Garden Grove, CA.

Analyst: A. Davis, N. Afendikova, M. Edwards, S. Kabbaj, N. Hoang, K. Tran, J. Lopez, J. Mares 128709

Sample Preparation: 0.3g+3mL 70% grain Ethanol, sonicate/heat at 50° C for 30 min

Stationary Phase: Silica gel 60, HPTLC plates

Mobile Phase: ethyl acetate: Formic Acid: Acetic acid: Water [10/0.9/0.9/2]

Detection: (1) UV 366 nm
(2) Natural Product + Polyethylene Glycol, 366nm (Reich, E., 2007)

Reference Standard: Lane 16(3µl) Ginkgo Biloba Extract (,), Ethyl alcohol (6901001, VWR); Lane 1(3µl) Rutin (A0348926, ACR), Methanol (0000239114, VWR)

Reference Source: Method developed by Alkemist Labs
IDT-SOP-72-01

Comments & Conclusions: Lanes 4, 5 are the test sample CTLA 13263 (CTLA 13263) Lanes 2, 3, 12, 13, 14, 15 are the reference samples used for comparison. This test sample, CTLA 13263 (CTLA 13263), is consistent with the chromatographic profile of the reference samples of *Ginkgo biloba* used above. **This test sample CTLA 13263 (CTLA 13263) has characteristics of a customized extract derived from *Ginkgo biloba* leaf.**

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.

Khanh Tran
HPTLC, R&D Technical Supervisor

Digitally signed by Khanh Tran
DN: cn=Khanh Tran, o, ou, email=Khanh@alkemist.com, c=US
Date: 2019.12.23 14:12:37 -08'00'
Adobe Acrobat version: 2019.021.20061

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

Report Date: 12/20/19

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 13263.

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

ITF CHEMICAL Ltda.
Quality Assurance Department
Manufactured in Brazil

CERTIFICATE OF ANALYSIS Nº 00950114

Code: FV3358

Manuf. date: 11/2020
Retest. date: 11/2022

Camaçari: 03/12/2020

Product: SerinAid 70P
Sinonym: Phosphatidylserine 70% Powder
Formula: ==========

Batch Nº: 20B0348

Tests	Quality specifications		Results	Test Method
Description	Light-yellow to yellow powder		Conform	Visual
Identification	TLC or NMR (Positive)		Conform	P31 NMR/ITF Chemical
Phospholipids	Phosphatidylserine:	NLT 70%	72	P31 NMR/ITF Chemical
	Phosphatidylcholine:	0 - 6%	2	P31 NMR/ITF Chemical
	Phosphatidylethanolamine:	0 - 6%	2	P31 NMR/ITF Chemical
	Phosphatidylinositol:	0 - 4%	1	P31 NMR/ITF Chemical
Peroxide Value	Not more than 5		0	Iodide Titration
Moisture (K.F.)	Not more than 1.5%		0.6	Karl Fischer
Microbial Contamination	Total Plate Count:	NMT 1000 CFU/g	50	USP
	Yeast and Moulds:	NMT 100 CFU/g	LT 100	USP
	Coliforms:	Negative/g	Negative	USP
	Staphylococcus aureus:	Negative/g	Negative	USP
	Escherichia coli:	Negative/g	Negative	USP
	Salmonella:	Negative/10g	Negative	USP

Manufacturer Name & Address:
ITF Chemical Ltda.
Rua Beta, 574
Area Industrial Norte, COPEC, 42816-090
Camaçari, Bahia
Brazil
P: 001.55.71.3634.2940
F: 001.55.71.3634.2902

USA Business Unit & Address:
Chemi Nutra
11100 Metric Blvd
Suite 200D Austin,
TX 78758
USA

DATE
03.12.2020

QUALITY CONTROL
ANA PAULA ALVES

CTLA
Contract TESTING Laboratories
OF AMERICA

Certificate of Analysis

Sample Information

CTLA ID: 29195
Date Received: 3/22/2021
Sample Name: 10619 SerinAid® Phosphatidyl Serine 70%
Lot Number: 34176
Customer: Origin Nutraceutical

Analysis	Method	MDL	Specification	Result	Units
ID	FTIR		Report	>95	%

3/24/2021
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.

CTLA
Contract TESTING Laboratories
OF AMERICA

Certificate of Analysis

Sample Information

CTLA ID: 65459
Date Received: 1/4/2023
Sample Name: 10619 SerinAid® Phosphatidyl Serine 70%
Lot Number: 34176
Customer: Origin Nutraceutical

Analysis	Method	MDL	Specification	Result	Units
Phosphatidyl Serine	HPLC	0.002	Report	98.3	%
Phosphatidylserine	NMR		Report	Attached	

2/28/2023
DATE

Quality Manager

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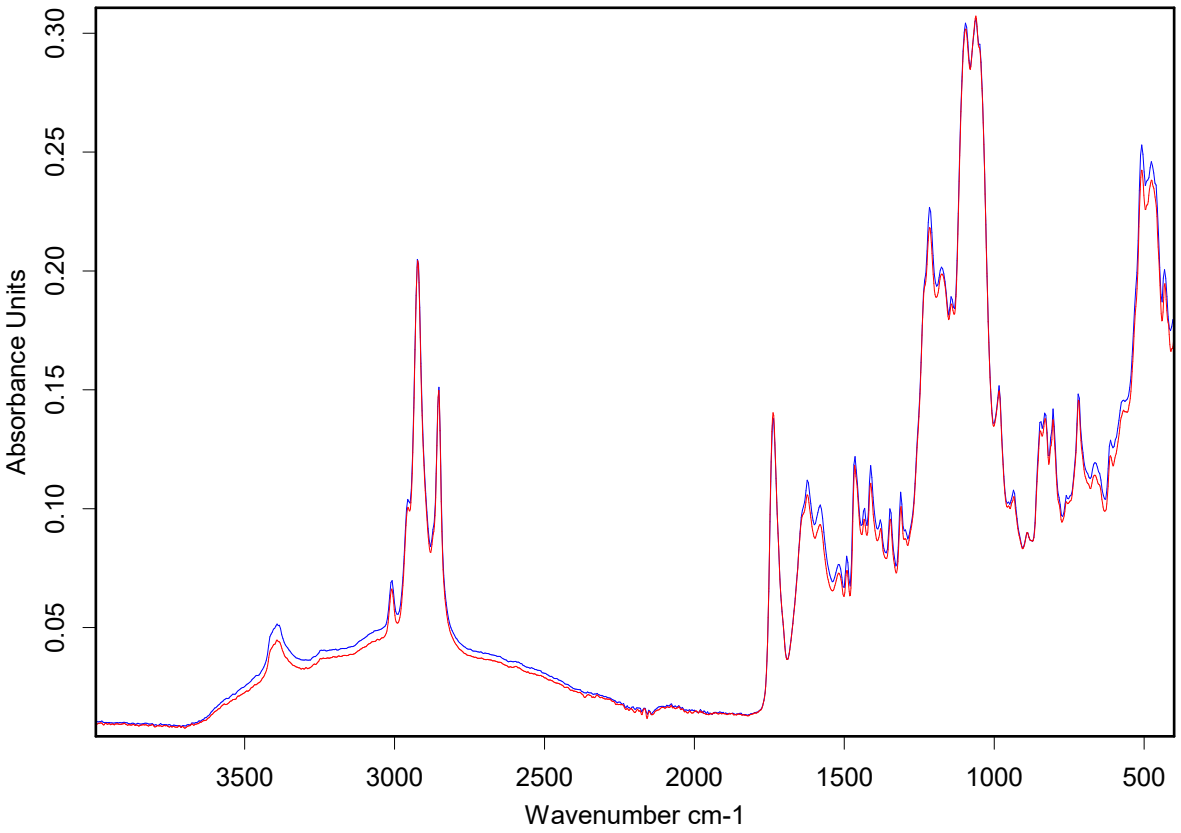

Product Number	ON 10619 SerinAida Phosphatidyl Serine (341
Entry No.	2415
Library name	ORIGIN STANDARDS LIBRARY.S01
Library description	Origin Nutraceutical
Copyright	Origin Nutraceutical Materials Only

Color	Hit Quality	Compound name	CAS Number	Molecular formula	Molecular weight
	980	ON 10619 SerinAida Phosphatidyl Serine (34176) Standard 3			

Color	File	Path	Spectrum Type
	29195-ON 10619 SerinAida Phosphatidyl Serine (34176).0	C:\Users\Israel\Documents\Bruker\OPUS_7.5.18\Data\MEAS	Query Spectrum

Certificate of Analysis

CTLA14910-1

Steelyard Analytics, Inc. | 704 Quince Orchard Road Suite 130 | Gaithersburg, MD 20878 (USA)

Contract Testing Laboratories of America
Kimberly Nuttall
151 E. 3450 N.
Spanish Fork, UT 84660
United States

Phone: +1 (240) 398-5380
E-Mail: info@steelyardanalytics.com

Sample Ident.:	**CTLA65459**	**Batch/Lot:**	**N/A**
Steelyard Code:	**CTLA14910-1**	**Arrival:**	**Feb 22nd, 2023**
Analysis method:	Quantitative ^{31}P-NMR Spectroscopy		
Instrument:	Bruker Avance III HD 600 MHz NMR spectrometer with automated sample changer and cBBO cryoprobe		
Internal standard:	Triphenyl phosphate (TPP, Tokyo Chemical Industry, Tokyo (J); Art.-Nr. P0272; RI 5-4)		
Content [%]:	100.0	MW [g/mol]:	326.29

TPP (5 - 4)	Integral	Molecular weight [g/Mol]	mMol	Initial weight [mg]	Content [%]	Number P
Internal Standard	19.94	326.29	0.0615	20.07	100.0	1
Test item		lecithin		300.13		1
Phospholipid	**Integral**	**Molecular Weight [g/Mol]**	**mMol**	**Content [mg]**	**Weight-%**	**Mol-%**
PC	2.22	770.0	0.0068	5.2636	**1.75**	1.89
2-LPC	0.48	515.0	0.0015	0.7626	**0.25**	0.41
PS-Na	81.95	797.2	0.2528	201.5291	**67.15**	69.98
LPS	2.54	517.0	0.0078	4.0429	**1.35**	2.16
PE	2.24	725.0	0.0069	5.0074	**1.67**	1.91
LPE	0.91	470.0	0.0028	1.3223	**0.44**	0.78
APE	3.53	990.0	0.0109	10.7681	**3.59**	3.01
PG	0.38	758.0	0.0012	0.8862	**0.30**	0.32
DPG	2.47	682.5	0.0076	5.2086	**1.74**	2.11
PA	14.23	685.0	0.0439	30.0689	**10.02**	12.15
LPA	1.45	430.0	0.0045	1.9233	**0.64**	1.24
Other	4.71	770.0	0.0145	11.1962	**3.73**	4.03
Sum	117.10		0.3612	277.98	**92.62**	100.00
Phosphorus			0.3612	11.19	**3.73**	
			Measurement	A	Balance	XP205
#NV					Mettler-Toledo XP205	

Annotations:
- *) = not observed, no signal assignment
- The integral value may be equivalent to a single value, a sum or a subtraction
- Phospholipids that are not detected/have a value of "0" are filtered out and do not appear in the individual list
- Integrals of phospholipid signals not assigned are recorded as other or other GPL

Steelyard Analytics, Inc. Electronic Signature:

Prepared by:	The result refers exclusively to the test item CTLA14910-1 analyzed by Steelyard Analytics, Inc. The assessment of the plausibility of this result is the responsibility of the customer.
_____	

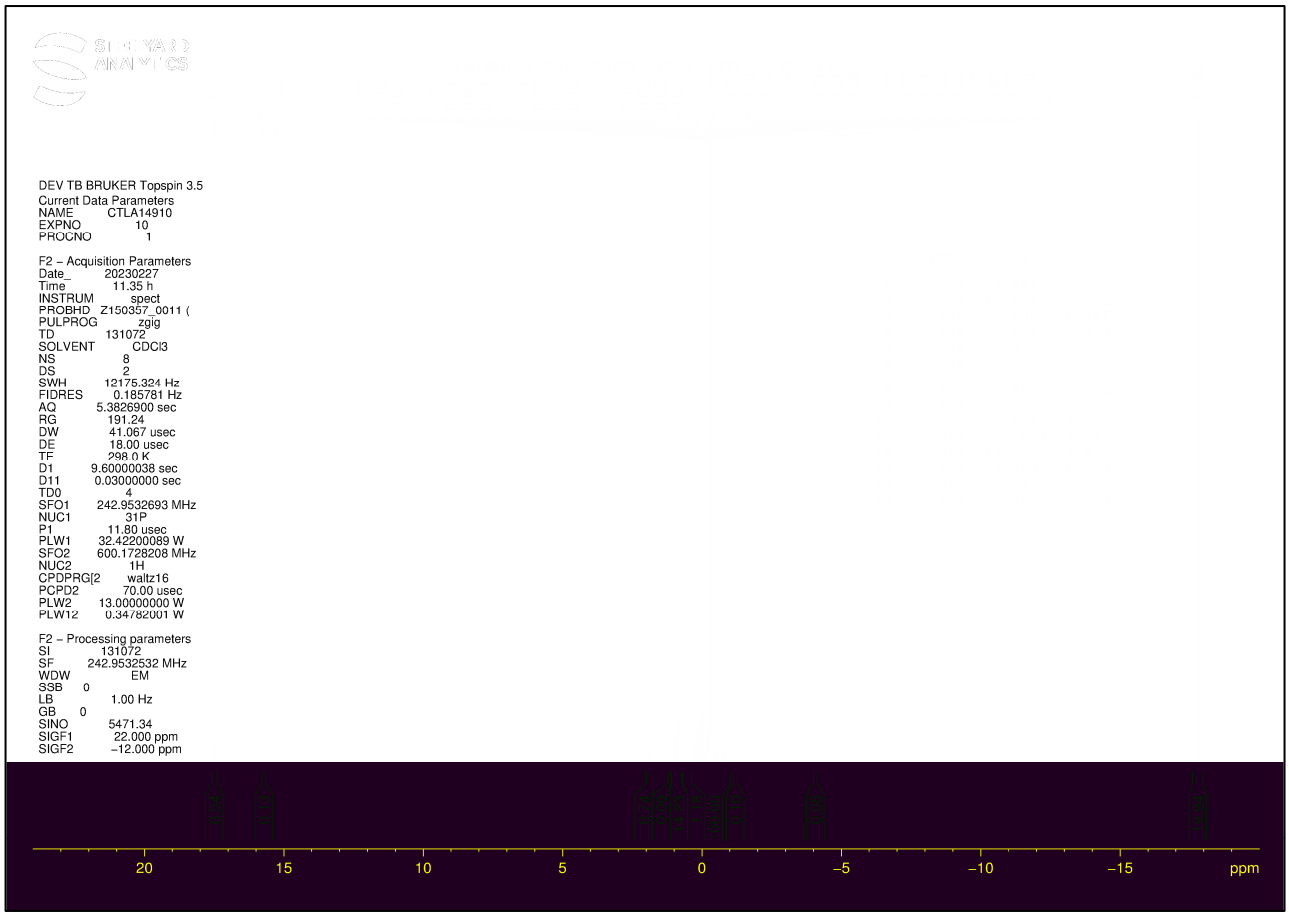

Fig. 1 ^{31}P-NMR spectrum of test item CTLA14910-1

creative compounds

Certificate of Analysis

Product Name: R-(+)-Lipoic Acid Sodium Salt
Batch Number: RALA.N.2109111
Manufacturing Date: September, 2021
Re-Test Date: September, 2023
Country of Origin: China

Item	Standard	Result	Method
Appearance	Off-white to light yellow powder	Off-white to light yellow powder	Organoleptic
Melting Point	230°C ~ 250°C	230°C ~ 250°C	USP
Solubility (H_xO)	Soluble in Water	Soluble in Water	USP
Specific Rotation	+85° ~ +105°	+99.7°	USP
Loss on Drying	3.0% max	1.0%	USP
Heavy Metals	10 ppm max	<10 ppm	USP
Total Microbial Count	1,000 per/g max	<10 per/g	USP
Molds & Yeasts	100 per/g max	<10 per/g	USP
E. Coli	Negative	Negative	USP
Salmonella	Negative	Negative	USP
Particle Size	100% through 20 mesh 80% through 80 mesh	100% through 20 mesh 80% through 80 mesh	USP
Assay R-Alpha Lipoic Acid R-(+)-Lipoic Acid Sodium	 80.0% min 99.0% min	 81.6% 99.8%	 HPLC

Conclusion: The above results meet the factory standard

Creative Compounds, LLC
P.O. Box 4011 | Scott City, MO 63780 | Phone: (877) 203-6010 | Fax: (573) 264-1444
E-mail: sales@creativecompounds.com | www.creativecompounds.com

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Contract TESTING Laboratories
OF AMERICA

Certificate of Analysis

Sample Information

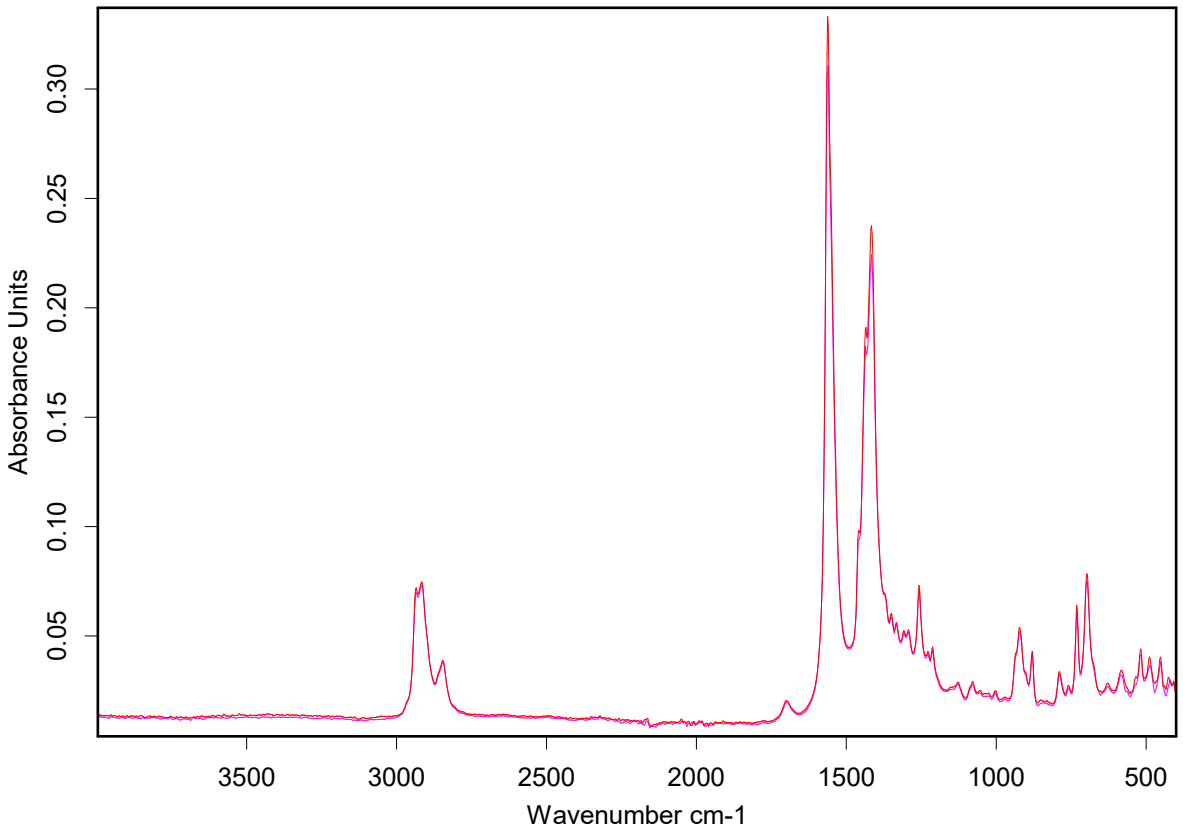
CTLA ID: 62918
Date Received: 11/23/2022
Sample Name: 10552 DRM R-ALA Sodium Salt
Lot Number: 45947
Customer: Origin Nutraceutical

Analysis	Method	MDL	Specification	Result	Units
ID, Rapid Complete Micro Combo					
ID	FTIR		Report	95.1	%
Total Plate Count	USP <2021>	100	Report	<100	cfu/g
Total Coliforms	USP <2021>	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
Sodium	ISE	0.000005	≥99%	96.266 *	%
R-Alpha Lipoic Acid (RALA)	HPLC		Report	88.430	%

12/8/2022
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 10552 DRM R-ALA Sodium Salt (45947) St
Entry No.	3012
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
	985	ON 10552 DRM R-ALA Sodium Salt (45947) Standard 2			

Color	File	Path	Spectrum Type
	65518-ON 10552 R-ALA Sodium Salt (45947).0	C:\Users\CTLA Admin\Documents\Bruker\OPUS_7.5.18\Data\MEAS	Query Spectrum