

Title: <b>Micro Liposomal C Liquid</b>	
Allergy Research Group® / NutriCology®	
Document No.: 76770CA	Revision: 004

## Certificate of Analysis

<b>Part Number</b>	76770		
<b>Lot Number</b>	1911		
<b>Product Count &amp; Form</b>	4 fl oz (120ml)		
<b>Packaging, Closure</b>	Amber PET with screw cap		
<b>Storage Condition</b>	Long Term Storage: Refrigerator, Short term Storage: In a cool dry place or refrigerate		
<b>Shelf Life</b>	24 months	Expiration Date	04/21
<b>Label Number, Size</b>	76770L, K		
<b>Retain Sample</b>	4 bottles total		

### ANALYSIS

#### Physical

Attribute	Method / SOP	Specification	Test Result
Product Color, Size	SOP 515	Yellow liquid	Complies
Product Taste	SOP 515	Acceptable, Sweet, slightly tangy	Complies

#### Purity/Strength per Teaspoon

Active Ingredients	Label Claim	Release Limits	Test Result
Vitamin C (as Sodium Ascorbate)	1000 mg	100 - 150% LC by titration	1079 mg
Sodium	131 mg	100 - 150% LC by ICP-OES	100 - 150% LC by ICP-OES*
Essential Phospholipids (from Purified Sunflower Lecithin)	250 mg	100 - 150% LC by P31-NMR	100 - 150% LC by P31-NMR*
<b>Other Ingredients:</b> Water, Glycerin, Ethanol, Lemon essential oil			

\* Production and Process control

#### Identification \ Chemical \ Heavy Metals

Attribute	Method / SOP	Specification	Test Result
Identity	Bulk Certificate of Analysis Review	Approved	Complies
Liposome size	DLS- Particle Sizing	Perform and Report 60 nm-150 nm	Perform and Report 60 nm-150 nm*
Arsenic (inorganic)	ICP-MS per USP <2232>	≤ 15 µg/day Ψ	BQL Ψ
Cadmium	ICP-MS per USP <2232>	≤ 5 µg/day Ψ	BQL Ψ
Mercury (total)	ICP-MS per USP <2232>	≤ 15 µg/day Ψ	BQL Ψ
Lead	ICP-MS per USP <2232>	≤ 10 µg/day Ψ	BQL Ψ

Ψ Permitted Daily Exposure, Φ Complies with California Proposition 65 Limits, \* Production and Process control. BQL; Below Quantitation limit.

Title: <b>Micro Liposomal C Liquid</b>	
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**Microbiology**

Attribute	Method / SOP	Specification	Test Result
Total Aerobic Count	USP/ AOAC/ FDA BAM	$\leq 1 \times 10^4$ CFU/g	<10 CFU/g
Total Yeast & Mold	USP/ AOAC/ FDA BAM	$\leq 1 \times 10^3$ CFU/g	<10 CFU/g
Coliform	USP/ AOAC/ FDA BAM	$\leq 1 \times 10^2$ CFU/g	<10 CFU/g
Escherichia coli	USP/ AOAC/ FDA BAM	None Detected	None Detected
Staphylococcus aureus	USP/ AOAC/ FDA BAM	None Detected	None Detected
Salmonella	USP/ AOAC/ FDA BAM	None Detected	None Detected

\* Production and Process control.

Approval: 	Date: 05/28/19
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# Micro Quality Labs, Inc.

Specializing in Pharmaceutical, Dietary Supplements, Toys and Cosmetic Testing  
3125 N. Damon Way • Burbank, California 91505  
(818) 845-0070 • Fax: (818) 845-0030  
E-Mail: [Karine@MicroQualityLabs.com](mailto:Karine@MicroQualityLabs.com)



**Customer:** Allergy Research Group, LLC  
**Address:** 2300 North Loop Road  
Alameda, CA 94502

## ANALYTICAL/CHEMICAL CERTIFICATE OF ANALYSIS

**Sample Name:** PURE VITAMIN C LIPOSOME  
**Product Code:** 86770  
**Batch/Lot #:** CSF1911  
**MQL Accession:** 190423-0221

**PO#:** MH04192019  
**Sample Description:** FG  
**Rush:** 2-3 business days  
**Received Date:** 04/23/19

Test Requested:	Test Method:	Specification:	Results:
Vitamin C (as Sodium Ascorbate)	MQLTM-0149 By Titration	1000 mg/ 5 mL	1079 mg/ 5 mL

**Prepared By:**

  
Kendra Hensley/Document Control Specialist

APR 30 2019

04/30/19

**Reviewed By:**

  
Raffie Avakian/Quality Assurance Reviewer

APR 30 2019

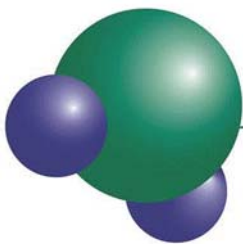
04/30/19

**Comment:** REV-01 Updated Product Code per Client Request.

*Micro Quality Laboratories, Inc. (MQL), is an A2LA ISO 17025 accredited testing laboratory (Certificate Number 3034.01). The requirements of ISO 17025 were followed for the test, results and preparation of this certificate of analysis. MQL's scope of accreditation may be found on A2LA or MQL websites.*

*The aforementioned results on this report are representative of the samples submitted and may not be indicative of the entire manufacture, batch, and/or lot. Applicable current GMP's shall always be used when sampling. GLP's shall always be practiced by Micro Quality Labs to ensure the most accurate results.*

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## Analytical Report

April 26, 2019

Tuyen Luong  
Allergy Research Group/NutriCology  
2300 North Loop Road  
Alameda, CA 94502

Page 1 of 1  
WO Number: W19D0908

Client: Allergy Research Group-QC  
Client #: A5537-T  
Sample Type: Liquid Product-Mass  
Collector: Client

Customer PO: MH04192019  
Date Received: 4/22/2019  
Date Completed: 04/26/2019  
Discard Date: 05/10/2019

**CSL#: 19D2298 Pure Vitamin C Liposome - Lot#: 86770/CSF1911**

Parameter	Result	PQL	Method	Date	Analyst
Arsenic	<0.050 ug/g	0.050	ICP MS	04/25/19	JTP
Cadmium	<0.050 ug/g	0.050	ICP MS	04/25/19	JTP
Lead	<0.050 ug/g	0.050	ICP MS	04/23/19	JTP
Mercury	<0.050 ug/g	0.050	ICP MS	04/25/19	JTP

**CSL#: 19D2298**

Parameter	Result	Serving Size	Unit Weight	Specification
Arsenic	<0.05 ug/g	1 ml	NA	<0.50 ug/g
Cadmium	<0.05 ug/g	1 ml	NA	<0.50 ug/g
Lead	<0.05 ug/g	1 ml	NA	<0.50 ug/g
Mercury	<0.05 ug/g	1 ml	NA	<0.50 ug/g

Respectfully Submitted,  
Chemical Solutions, Ltd.

QA Representative

Notes:

CONFIDENTIAL REPORT. This report is confidential and is for the sole use of the addressee.  
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The units for the PQL are the same as those shown for the result.





466 Kato Terrace,  
Fremont, CA 94539  
Phone: 510-979-1879  
Fax: 510-668-1980  
E-mail: labdata@aemtek.com  
Web: www.aemtek.com

## Certificate of Analysis

**Project Description:** Product Testing (PO #MH04192019)  
**Report issued To:** Allergy Research Group  
2300 North Loop  
Alameda, CA 94501  
**Contact:** Janice Vu

**Sampling Date:** 2019-04-19  
**Sample Received:** 2019-04-22  
**Analysis Started:** 2019-04-22  
**Analysis Performed By:** EM, MM, JC  
**Report Issue Date:** 2019-04-25

**AEMTEK #: 19041134**

Sample ID	Analyte	Aerobic Plate Count	Total Coliforms	Yeast	Mold	Escherichia coli	Salmonella	Staphylococcus aureus
14	Method	AOAC OMA 980.12	AOAC OMA 991.14	AOAC OMA 2014.05	AOAC OMA 2014.05	USP 37 <62> (mod.)	USP 37 <62> (mod.)	USP 37 <62> (mod.)
	Reporting Unit	CFU/g	CFU/g	CFU/g	CFU/g	per 10g	per 10g	per 10g
	Method Detection Limit for Reporting	10	10	10	10	P/A	P/A	P/A
	Sample Description	RESULTS						
	Pure Vitamin C Liposome	<10	<10	<10	<10	ND	ND	ND
	Lot #/Code	86770/ CSF1911						

**Terminology:**

CFU = Colony Forming Units  
< Indicates less than the reporting limit as noted  
ND = Not Detected, negative, absent. Sensitivity is about 1 organism per test portion.  
BAM = FDA Bacteriological Analytical Manual  
AOAC OMA = Official Methods of Analysis of the AOAC International, 18th ed.

MPN = Most Probable Number  
P/A = Presence/Absence  
CP Staph = Coagulase Positive Staphylococci (Staphylococcus aureus)  
CMMEF = Compendium of Methods for the Microbiological Examination of Foods, 4th ed.  
AOAC RI = AOAC Research Institute Performance Tested.

N/A = Not Applicable or not analyzed

*JV*  
04/25/19