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

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

ANALYTICAL/CHEMICAL CERTIFICATE OF ANALYSIS

Sample Name: **Acetyl –L- Glutathione**
Product Code: 46430
Batch/Lot #: 20180320@1
MQL Accession #: 180423-0105

PO#: JV04202018
Sample Description: FG
Rush: N/A
Received Date: 04/23/18

Test Requested:	Test Method Number:	Client Specification:	Results:
S-Acetyl-L-Glutathione	MQLTM-0183 By HPLC	100 mg/tab	103 mg/tab

Prepared By:

Diana Zavala/Document Control Specialist — APR 30 2018 — 04/30/18

Reviewed By:

Karine Aylozyan/QA Technical Director — APR 30 2018 — 04/30/18

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.

This report is submitted for the exclusive use of the person, partnership, or corporation to whom it is addressed, and neither the report nor the name of Micro Quality Labs, Inc. nor any member of its staff, may be used in connection with the advertising or sale of any product or process without written authorization from Micro Quality Labs, Inc. Failure to comply will result in immediate legal action by Micro Quality Labs, Inc.

chemical solutions ltd.®
trace elemental analysis

Analytical Report

April 26, 2018

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

WO Number: W18D0871

Client: Allergy Research Group-QC
Client #: A5537-T
Sample Type: Tablet
Collector: Client

Customer PO:
Date Received: 4/23/2018
Date Completed: 04/26/2018
Discard Date: 05/10/2018

CSL#: 18D1996 **Acetyl L-Glutathione - Lot#: 46430 / 20180320@1**

Parameter	Result	PQL	Method	Date	Analyst
Arsenic	<0.050 ug/g	0.050	ICP MS	04/25/18	EM
Cadmium	<0.050 ug/g	0.050	ICP MS	04/25/18	EM
Lead	<0.050 ug/g	0.050	ICP MS	04/24/18	HG
Mercury	<0.050 ug/g	0.050	ICP MS	04/25/18	EM

CSL#: 18D1996

Parameter	Result	Serving Size	Unit Weight	Specification
Arsenic	<0.05 ug/g	1 Tablet	0.40 g	<0.50 ug/g
Cadmium	<0.05 ug/g	1 Tablet	0.40 g	<0.50 ug/g
Lead	<0.05 ug/g	1 Tablet	0.40 g	<0.50 ug/g
Mercury	<0.05 ug/g	1 Tablet	0.40 g	<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.
This report can only be reproduced in full.
The units for the PQL are the same as those shown for the result.

AEMTEK, INC.

466 Kato Terrace.
Fremont, CA 94539
Phone: 510-979-1979
Fax: 510-668-1980
E-mail: labdata@aemtek.com
Web: www.aemtek.com

Project Description: Product Testing (PO # MH04202018)
Report Issued To: Allergy Research Group
2300 North Loop
Alameda, CA 94501
Contact: Janice Vu

Certificate of Analysis

AEMTEK #: 18041087

Sampling Date: 2018-04-20
Sample Received: 2018-04-23
Analysis Started: 2018-04-23
Analysis Performed By: VT, WY
Report Issue Date: 2018-04-26

Analyte			Aerobic Plate Count	Total Coliforms	Yeast	Mold	Escherichia coli	Salmonella	Staphylococcus aureus
Method			AOAC OMA 990.12	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 ID	**Sample Description**	**Lot #/Code**	**RESULTS**						
9	Acetyl-L-Glutathione	46430/ 20180320@1	<10	<10	<10	<10	ND	ND	ND

Terminology:

CFU = Colony Forming Units g = gram
< 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 N/A = Not Applicble or not analyzed
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.

04/26/18

Title: **Acetyl-Glutathione, 100 mg**	
Allergy Research Group® / NutriCology®	
Document No.: 76430CA	Revision: 006

Certificate of Analysis

Part Number	76430		
Lot Number	803201		
Product Count & Form	60 Scored Tablets		
Packaging, Closure	75 cc bottle, desiccant, rayon		
Storage Condition	Room temperature		
Shelf Life	24 months	Expiration Date	04/20
Label Number, Size	76430L, A		
Retain Sample	2 bottles per label (4 bottles total)		

ANALYSIS

Physical

Attribute	Method / SOP	Specification	Test Result
Product Color & Size	SOP 515	White, scored on one side and plain on another side, size T1	Complies
Product Weight	In house	Meets USP <2091> 350 – 450 mg	Pass, 405 mg
Disintegration time	SOP 522	Meets USP <2040>	Pass, 4 mins

Purity / Strength per Tablet

Ingredients	Label Claim	Specification	Test Result
S-Acetyl-Glutathione	100 mg	100 – 150% LC by HPLC	103 mg
Other Ingredients:			
Microcrystalline cellulose, Micosolle ®, Calcium Phosphate, sodium starch glycolate, vegetable magnesium stearate.			

*Production and process Control

Identification \ Chemical \ Heavy Metals

Attribute	Method / SOP	Specification	Test Result
Identity	Bulk Certificate of Analysis Review	Approved	Complies
Identity	Near Infrared Spectroscopy	Matches reference	Complies
Arsenic (inorganic)	ICP-MS per USP <2232>	≤ 15 mcg/day Ψ	BQL
Cadmium	ICP-MS per USP <2232>	≤ 5 mcg/day Ψ	BQL
Mercury (Total)	ICP-MS per USP <2232>	≤ 15 mcg/day Ψ	BQL
Lead	ICP-MS per USP <2232>	≤ 10 mcg/day Ψ	BQL

Ψ- Permitted Daily Exposure, *Production and process Control, BQL - Below Quantitation Limit

Title: **Acetyl-Glutathione, 100 mg**	
Allergy Research Group® / NutriCology®	
Document No.: 76430CA	Revision: 006

Microbiology

Attribute	Method / SOP	Specification	Test Result
Total Aerobic Count	USP/ AOAC/ FDA BAM	$\leq 1 \times 10^3$ CFU/g	<10 CFU/g
Total Yeast & Mold	USP/ AOAC/ FDA BAM	$\leq 1 \times 10^2$ 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: 10/09/18