

Title: L-Glutamine 200 Grams Powder	
Allergy Research Group* / NutriCology*	
Document No.: 72130CA	Revision: 007

Certificate of Analysis

Part Number	72130		
Lot Number	0219067		
Product Count & Form	200 grams Powder		
Packaging, Closure	300 cc bottle		
Storage Condition	Room Temperature		
Shelf Life	36 months	Expiration Date	03/22
Label Number, Size	72130L, D		
Retain Sample	1 bottle per label (2 bottles total)		

ANALYSIS

Physical

Attribute	Method / SOP	Specification	Test Result
Product Color	SOP 515	Fine white-beige powder	Complies
Product Odor/taste	SOP 515	Characteristic odor/taste	Complies

Purity/Strength

Active Ingredients	Label Claim	Release Limits	Test Result
L-Glutamine	4.7 g/serving	100-150% LC by HPLC	4.7 g

*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

Microbiology

Attribute	Method / SOP	Specification	Test Result
Total Aerobic Count	USP/ AOAC/ FDA BAM	≤ 1 x 10 ³ CFU/g	50 CFU/g
Total Yeast & Mold	USP/ AOAC/ FDA BAM	≤ 1 x 10 ² CFU/g	<10 CFU/g
Coliform	USP/ AOAC/ FDA BAM	≤ 1 x 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: 05/08/19
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Micro Quality Labs, Inc.

Specializing in Pharmaceutical, Dietary Supplements, Toys and Cosmetic Testing

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E-Mail: Karine@MicroQualityLabs.com

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

ANALYTICAL/CHEMICAL CERTIFICATE OF ANALYSIS

Sample Name: **L-GLUTAMINE**
Product Code: 82130
Batch/Lot #: 0219067
MQL Accession: 190425-0244

PO#: MH04232019
Sample Description: FG
Rush: 2-3 business days
Received Date: 04/25/19

Test Requested:	Test Method:	Specification:	Results:
L-Glutamine	MQLTM-0198 By GC-FID	4.7 g / 4.7 g	4.7 g / 4.7 g

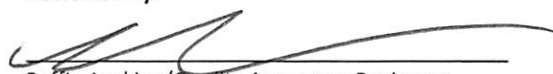
Prepared By:


Kendra Hensley/Document Control Specialist

APR 30 2019

04/30/19

Reviewed By:

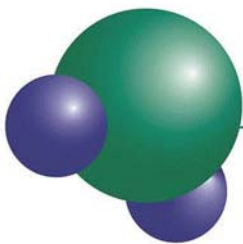

Raffie Avakian/Quality Assurance Reviewer

APR 30 2019

04/30/19

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

May 01, 2019

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

Page 1 of 1
WO Number: W19D1061

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

Customer PO: MH04232019
Date Received: 4/25/2019
Date Completed: 05/01/2019
Discard Date: 05/15/2019

CSL#: 19D2714 L-Glutamine - Lot#: 82130/0219067

Parameter	Result	PQL	Method	Date	Analyst
Arsenic	<0.050 ug/g	0.050	ICP MS	05/01/19	CEN
Cadmium	<0.050 ug/g	0.050	ICP MS	05/01/19	CEN
Lead	<0.050 ug/g	0.050	ICP MS	04/25/19	JTG
Mercury	<0.050 ug/g	0.050	ICP MS	05/01/19	CEN

CSL#: 19D2714

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



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Certificate of Analysis

Project Description: Product Testing (PO # MH04232019)
Report Issued To: Allergy Research Group
2300 North Loop
Alameda, CA 94501
Contact: Janice Vu

AEMTEK #: 19041277

Sampling Date: 2019-04-23
Sample Received: 2019-04-24
Analysis Started: 2019-04-24
Analysis Performed By: EM, JC, SL
Report Issue Date: 2019-04-27

Sample ID	Analyte	Aerobic Plate Count	Total Coliforms	Yeast	Mold	Escherichia coli	Salmonella	Staphylococcus aureus
1	L-Glutamine	AOAC OMA 990.12 CFU/g 10	AOAC OMA 991.14 CFU/g 10	AOAC OMA 2014.05 CFU/g 10	AOAC OMA 2014.05 CFU/g 10	USP 37 <62> (mod.) per 10g P/A	USP 37 <62> (mod.) per 10g P/A	USP 37 <62> (mod.) per 10g P/A
RESULTS								
	Method Description	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
	Lot #/Code	82130/ 0219067						
		50	<10	<10	<10	ND	ND	ND

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

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