

## Certificate of Analysis

Lot # 08020-05

Description: Glucosamine HCl Powder ✓

Lot: 513Y2004069 ✓

Ship Date: 08/05/2020

Customer PO: 42969 ✓

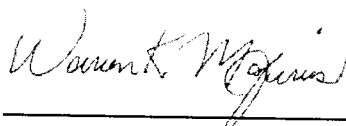
Customer Item: 81700149 ✓

General Properties	Specification	Test Method	Result †
Appearance	White free flowing powder	Visual	Complies
Bulk density loose (gm/cc)	>= 0.60 <= 0.90	Loose fill	0.75
Particle size thru # 20 (%)	>= 95	Rotap 5 minutes	Complies
<b>Analytical</b>			
Assay Glucosamine HCl (% Dry Basis)	>= 98.0 <= 102.0	USP curr. edit.	99.3
Assay Glucosamine (% Dry Basis)	>= 82	By calculation	83
Identification A	Meets the requirements	USP curr. edit.	Complies
Identification B	Meets the requirements	USP curr. edit.	Complies
Identification C	Meets the requirements	USP curr. edit.	Complies
Loss on drying (%)	<= 1.0	USP curr. edit.	0.2
pH	>= 3.0 <= 5.0	USP curr. edit.	4.4
Specific rotation (deg)	>= +70.0 <= +73.0	USP curr. edit.	+71.7
ROI (%)	<= 0.1	USP curr. edit.	0.1
Sulfate (%)	<= 0.24	USP curr. edit.	Complies
Lead (ppm)	<= 0.5	ICP-MS	< 0.5
Arsenic (ppm)	<= 1.5	ICP-MS	< 0.5
Cadmium (ppm)	<= 0.5	ICP-MS	< 0.5
Mercury (ppm)	<= 0.2	ICP-MS	< 0.1
<b>Microbiological</b>			
APC (CFU/gm)	<= 1000	USP curr. edit.	Complies
Yeast/mold (CFU/gm)	<= 100	USP curr. edit.	Complies
E. coli (10 gm)	Negative	USP curr. edit.	Complies
Salmonella (10 gm)	Negative	USP curr. edit.	Complies

### Additional Information

Manufacture date 04/21/2020  
 Expiration date 04/21/2023  
 Storage condition Cool dry place sealed in light resistant container  
 Manufactured by Yangzhou Rixing Biotech Co Ltd  
 Country of origin China

Approved By:



Warren Majerus  
 VP of Quality Assurance

Date: 08/06/2020

† Test results based on information supplied by the manufacturer, unless otherwise noted.

\*\* Based on results from Pharmore's sampling plan.

The information contained in this certificate of analysis is believed to be accurate and is offered in good faith. Pharmore ingredients, however, cannot guarantee against natural product variations, patent infringement, liabilities or risk involved from the use of this product. Customer assumes all liability with the use of this product.

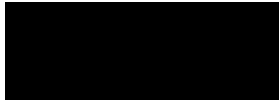


# Micro Quality Labs, Inc.

Specializing in Pharmaceutical, Dietary Supplements, Toys and Cosmetics 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:

Address:



## ANALYTICAL/CHEMICAL CERTIFICATE OF ANALYSIS

Sample Name: **GLUCOSAMINE HCl**  
Product Code: 81700149  
Batch/Lot: 081020-05  
MQL Accession: 200824-0103

PO#: 081720-01/RG  
Sample Description: RAW  
Rush: N/A  
Received Date: 08/24/20

Test Requested:	Test Method:	Specification:	Results:
Glucosamine HCl	MQLTM-0080 By HPLC	≥98%	98%

Prepared By:

Carolina Guzman/Document Control Specialist

AUG 31 2020

08/31/20

Reviewed By:

Katherine Carrillo/Quality Assurance Specialist

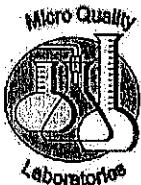
AUG 31 2020

08/31/20

**Rev.01- Specification updated.**

*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.*



# 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) 845-0080  
E-Mail: [Karlne@MicroQualityLabs.com](mailto:Karlne@MicroQualityLabs.com)



Customer: [REDACTED]  
Address: [REDACTED]

Received From:	<span style="background-color: black; color: black;">[REDACTED]</span>
Received Date:	08/21/20
Release Date:	08/27/20
PO #	081720-01/RG

## MICROBIOLOGICAL CERTIFICATE OF ANALYSIS


Sample Name: GLUCOSAMINE HCl  
Product Code: 81700149  
Batch/Lot #: 081020-05  
MQL Accession #: 989162

Description: RAW

Analyte:	Result:	Method:	Test Date:	Comment:
TPC	<10cfu/gm	TM-01 (Modified USP61)	08/21/20	N/A
Yeast/Mold	<10cfu/gm	TM-01 (Modified USP61)	08/21/20	N/A
E.coli	Absent	TM-01A (Modified USP62)	08/21/20	N/A
Salmonella/Shigella	Absent	TM-01A (Modified USP62)	08/21/20	N/A

All Products were tested in accordance with the USP Standard for Total Plate Count and Enrichment. Additional guidance was referenced by CFA: Microbiological Guidelines.

AUG 27 2020

Prepared By:  Sofia Makaryan/ Document Control Specialist

Reviewed By:  Ani Zohrabyan/Microbiologist

Date:

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.

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.