

## Certificate of Analysis

Lot# 092719-03

**Description:** Glucosamine HCl Powder

**Lot:** 513Y1907014

**Ship Date:** 09/24/2019

**Customer PO:** 42144

**Customer Item:** 81700149

<u>General Properties</u>	<u>Specification</u>	<u>Test Method</u>	<u>Result ‡</u>
Appearance	White free flowing powder	Visual	Complies
Bulk density loose (gm/cc)	>= 0.60 <= 0.90	Loose fill	0.76
Particle size thru # 20 (%)	>= 95	Rotap 5 minutes	Complies

**Analytical**

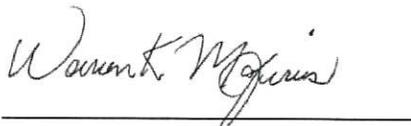
Assay Glucosamine HCl (% Dry Basis)	>= 98.0 <= 102.0	USP curr. edit.	99.5
Assay Glucosamine (% Dry Basis)	>= 82	By calculation	83
Identification A	Meets the requirements	USP curr. edit.	Complies
Identification B	Meets the requirements	USP curr. edit.	Complies
Identification C	Meets the requirements	USP curr. edit.	Complies
Loss on drying (%)	<= 1.0	USP curr. edit.	0.1
pH	>= 3.0 <= 5.0	USP curr. edit.	4.4
Specific rotation (deg)	>= +70.0 <= +73.0	USP curr. edit.	+72.4
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

**Microbiological**

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 07/04/2019  
 Expiration date 07/03/2022  
 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:** 09/25/2019

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

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

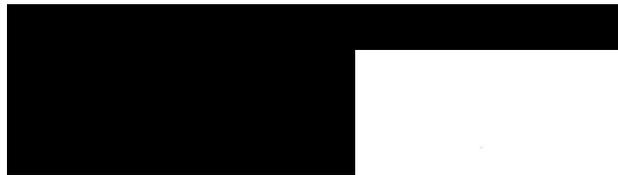
The information contained in this certificate of analysis is believed to be accurate and is offered in good faith. Pharmore ingredients, however, cannot guarantee against natural product variations, patent infringement, liabilities or risk involved from the use of this product. Customer assumes all liability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

Sales Order: SO26186



# Advanced Botanical Consulting & Testing Inc.

1169 Warner Ave, Tustin, CA 92780, Phone:(714)259-0384 Fax: (714)259-0385



Sample Name: Glucosamine HCl

Item#

Lot# 81700149/092719-03

Lab# 280351

PO# 101419-02/CTV

Analysis:	Method:	Result:	Spec:
Arsenic (As)	ICP/MS	0.001 ppm	< 1.5 ppm
Cadmium (Cd)	ICP/MS	0.003 ppm	< 0.5 ppm
Mercury (Hg)	ICP/MS	0.014 ppm	< 0.2 ppm
Lead (Pb)	ICP/MS	0.021 ppm	< 0.5 ppm
Glucosamine HCl (HPLC)	AOAC	99.33 %(d.b.)	90-102 % dry basis
Loss on Drying (LOD)	USP<731>	0.28%	N/A

Analyzed by:

  
\_\_\_\_\_  
Chemist

Approved by:

  
\_\_\_\_\_  
Wendi Wang, PhD, President

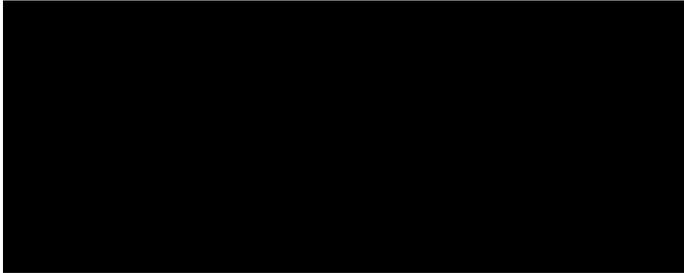


Cannabis Analytical Science Program



# Advanced Botanical Consulting & Testing, Inc.

1169 Warner Ave., Tustin, CA 92780, Phone: (714) 259-0384 Fax: (714) 259-0385



Client Sample ID: Glucosamine HCl

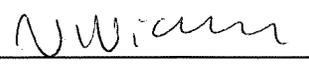
Lot#: 81700149/092719-03  
Lab#: 280351

Received Date: 10/16/2019

Report Date: 10/22/2019

Analyses	Results	Specifications	Method
Total Plate Count	< 10 CFU/g	< 1,000 CFU/g	USP <2021>
Yeast	< 10 CFU/g	< 100 CFU/g	USP <2021>
Mold	< 10 CFU/g	< 100 CFU/g	USP <2021>
<i>E. coli</i>	Negative/10g	Negative/10g	USP <2022>
<i>Salmonella</i>	Negative/10g	Negative/10g	USP <2022>

Analyzed by:   
Microbiologist

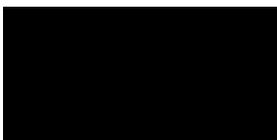
Approved by:   
Vivian Truong, Supervisor

# KML Laboratories, Inc.



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 Bonners Ferry, Idaho 83805  
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 Email: [Info@kmlmicro.com](mailto:Info@kmlmicro.com)

## Certificate of Analysis



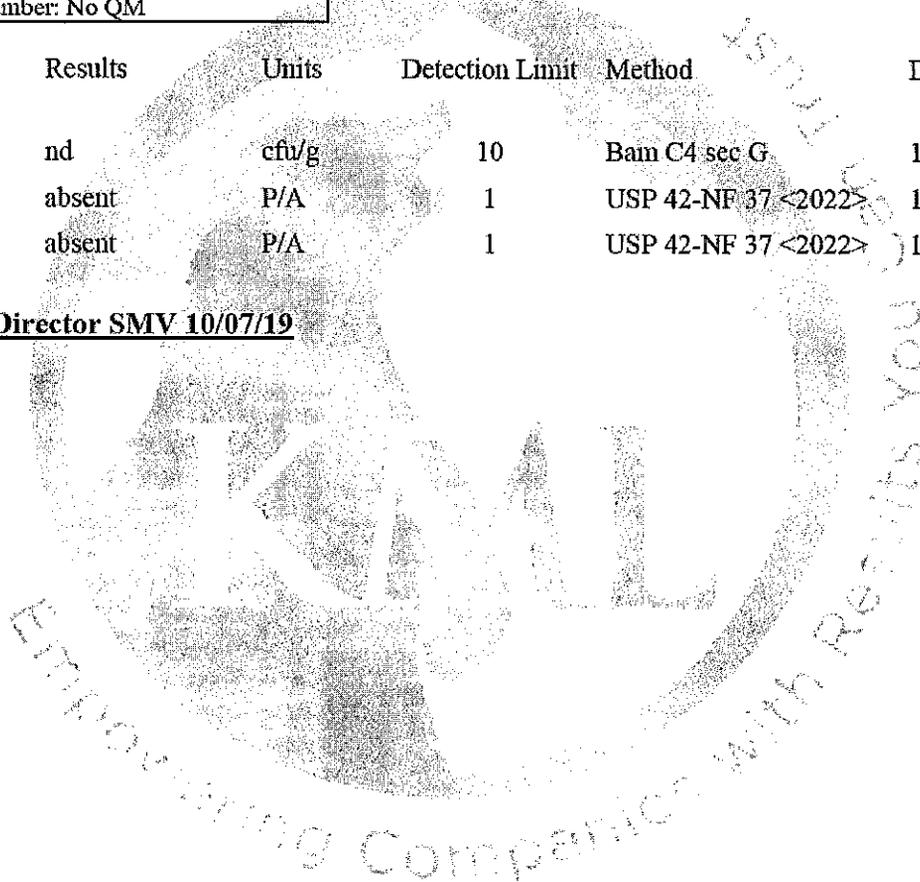
Invoice Number: 19.1562  
 PO Number:  
 Received Date: 10/2/2019  
 Number of Samples: 03  
 Project Name: Routine Testing

### Microbiology Report:

Lab #: 19-10049	Sample Lot: 092719-03	Sample Date: 9/27/2019
Sample Name: Glucosamine HCL Powder	Additional ID:	Plated Date: 10/02/19
Qualifying Material Number: No QM		

Test Performed	Results	Units	Detection Limit	Method	Date Analyzed
Coliforms	nd	cfu/g	10	Bam C4 sec G	10/03/19
E. coli	absent	P/A	1	USP 42-NF 37 <2022>	10/05/19
Salmonella	absent	P/A	1	USP 42-NF 37 <2022>	10/06/19

**Approved By: QA Director SMV 10/07/19**



Confidential

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AT-1805

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