

# Certificate of Analysis

Description: Sodium Hyaluronate HA

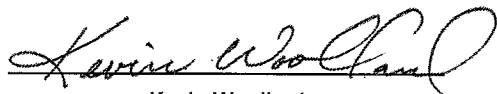
Lot: 385190116101

	<u>Specification</u>		<u>Test Method</u>	<u>Result</u> †
<b>General Properties</b>				
Appearance	White powder		Visual	Complies
Bulk density loose (gm/cc)	>=0.15	<=0.30	Loose fill	0.29
Particle size thru # 80 (%)	>= 90		Rotap 5 minutes	Complies
<b>Analytical</b>				
Assay Sodium Hyaluronate (% Dry Basis)	>= 93		By Calculation	97
Assay Hyaluronic Acid (% Dry Basis)	>= 88		By calculation	91
Assay Glucuronic Acid (% Dry Basis)	>= 45		UV-Vis	47
Loss on drying (%)		<= 8.0	USP curr. edit.	7.8
pH	>= 6.0	<= 8.0	USP curr. edit.	6.1
Protein (%)		<= 0.1	USP curr. edit.	0.1
Molecular weight (kDA)	>= 1300	<= 1700	USP curr. edit.	1400
Lead (ppm)		<= 0.5	ICP-MS	<0.5
Arsenic (ppm)		<= 1.5	ICP-MS	<1.5
Cadmium (ppm)		<= 0.5	ICP-MS	<0.5
Mercury (ppm)		<= 0.2	ICP-MS	<0.2
<b>Microbiological</b>				
APC (CFU/gm)		<=1000	USP curr. edit.	< 100
Yeast/mold (CFU/gm)		<= 100	USP curr. edit.	< 100
E. coli (10 gm)	Negative		USP curr. edit.	Negative
Salmonella (10 gm)	Negative		USP curr. edit.	Negative

**Additional Information**

Manufacture date 01/16/2019  
 Expiration date 01/15/2022  
 Storage condition Cool dry place sealed in light resistant container  
 Manufactured by  
 Country of origin China

Approved By:



Kevin Woollard  
 Director of QA

Date: 02/13/2019

† 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.