

## **Certificate Of Analysis**

Description:					<u>Lot #:</u>	
Sodium Hyaluronate HA		3951408121				
		<u>Standard</u>			<u>Result</u> *	
<b>Physical Properties</b>						
Appearance		White powder			Complies	
Particle size thru # 60 (%)	>=	90			100	
<u>Analytical</u>						
Assay (HA Dry Basis, %)	>=	93			97	
Assay (Glucoronic Acid, %)	>=	45			47	
Loss on drying (%)			<=	8.0	6.3	
рН	>=	6.0	<=	8.0	6.7	
Molecular weight (kDA)	>=	1300	<=	1700	1420	
Heavy Metals (ppm)			<=	20	<20	
Arsenic (ppm)			<=	1.5	Complies***	
Arsenic (ppm)			<=	2	<2	
<u>Microbiological</u>						
APC (CFU/gm)			<=	1000	<100	
Yeast/mold (CFU/gm)			<=	100	<100	
E. coli (CFU/gm)		Nega	tive		Negative	
Salmonella (25 gm)		Nega	tive		Negative	
Storage Conditions						
Manufacture date					Aug. 12, 2014	
Expiration date					Aug. 12, 2017	
Storage					Cool dry place sealed in light resistant	
-					container	
Manufactured by					Plant # 395	
Country of origin					China	
Revision #					Rev 7 7/29/2014	
Warren	K N	Huris				

Approved By:

Date: 10/2/2015

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

Warren K. Majerus VP Quality Assurance

\*\* Based on third party testing lab results.

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

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

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## Pharmore Ingredients, Inc.

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ATTN: Melissa Mack PO#: 5621

Client Sample ID: Sodium Hyaluronate HA Lot#: 3951408121 Lab Number: 132946

Received Date: 01/26/2015 Report Date: 02/02/2015

Analyses	Results
Glucuronic acid (UV-Vis)	45.17 %
Loss on drying (LOD)	2.90 %
Photostimulated luminescence (PSL)	Negative < T1 (=594 +/- 44)

Method: European Pharmacopeia, USP<731>, T1=700 count/60s, PSL is one of the irradiation residue screening tool. When sample measured has less than lower threshold (T1) count, it is considered un-irradiated material.

Analyzed b - Approved by: Chemist

Wendi Wang, PhD, President