



161694
Certificate Of Analysis

Customer:
 [Redacted]

PO #: 16179
Customer Part #: ZHYAACID
Ship Date: 12/14/16
Shipment #: 0000007647

DEC 22 2016 15:50
 #32016

SCANNED
 [Signature]

Description:
 Sodium Hyaluronate HA

Lot #:
 3951610013X

Physical Properties

	Standard	Result *
Appearance	White powder	Complies
Bulk Density Loose (gm/cc)	>= 0.15 <= 0.3	0.26
Particle size thru # 80 (%)	>= 90	Complies***

Analytical

Sodium Hyaluronate (Dry basis, %)	>= 93	95
Hyaluronic Acid (Dry basis, %)	>= 88	89
Glucuronic Acid (Dry basis, %)	>= 45	46
Loss on drying (%)	<= 8.0	6.5
pH	>= 6.0 <= 8.0	6.6
Protein (%)	<= 0.1	0.02
Molecular weight (kDA)	>= 1300 <= 1700	1430
Lead (ppm)	<= 0.5	<0.5
Arsenic (ppm)	<= 1.5	<1.5
Cadmium (ppm)	<= 0.5	<0.5
Mercury (ppm)	<= 0.2	<0.2

Microbiological

APC (CFU/gm)	<= 1000	<100
Yeast/mold (CFU/gm)	<= 100	Complies
E. coli (CFU/gm)	Negative	Negative
Salmonella (25 gm)	Negative	Negative

Storage Conditions

Manufacture date	Oct 01, 2016
Expiration date	Oct 01, 2019
Storage	Cool dry place sealed in light resistant container
Manufactured by	Plant # 395
Country of origin	China
Revision #	Rev 9 10/26/2016

Warren K. Majerus

Approved By:

Warren K. Majerus
 VP Quality Assurance

Date: 12/14/2016

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

** Based on third party testing lab results.

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

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