



BLOOMAGE FREDA BIOPHARM CO., LTD.

NO.678 TIANCHEN ST., HIGH-TECH DEVELOPMENT ZONE,
JINAN, CHINA 250101

CERTIFICATE OF ANALYSIS 16-E071311

Product Name: Sodium Hyaluronate (HA-TLM)

Batch No.: 1606222

Quantity: 206.958kg

Production Date: June 22, 2016

Expiry Date: June 22, 2019

Item	Standard	Result
1. Characters	White or almost white powder or granules	Complied
2. Identification		
A. Infrared absorption	Consistent with the <i>reference spectrum</i> <i>of sodium hyaluronate</i>	Complied
B. Reaction of sodium	Positive	Complied
3. pH	6.0~7.5	6.9
4. Transparency	≥99.0%	99.4%
5. Loss on drying	≤10.0%	5.7%
6. Limiting viscosity	13.0~17.3dl/g	14.3dl/g
7. Molecular weight	700K~1 000K Da	790K Da
8. Protein	≤0.05%	0.019%
9. Heavy metals	≤20ppm	<20ppm
10. Glucuronic acid	≥45.0%	46.1%
11. Sodium hyaluronate	≥93.0%	95.3%
12. Bacteria counts	<10cfu/g	Complied
13. Mold & Yeast	<10cfu/g	Complied
14. <i>Staphylococcus aureus</i>	Negative	Negative
15. <i>Pseudomonas aeruginosa</i>	Negative	Negative

Conclusion: up to the standard



Approved by: 李玲