



## Certificate of Analysis

<b>Name</b>	<b>Hyaluronic Acid</b>	<b>Grade</b>	<b>Injection Grade</b>
<b>Origin</b>	<b>Fermentation</b>	<b>Test Method</b>	<b>EP10.0</b>
<b>Lot No.</b>	<b>I202105173</b>	<b>Report Date</b>	<b>2021/05/18</b>
<b>MFG Date</b>	<b>2021/05/17</b>	<b>EXP Date</b>	<b>2023/5/16</b>

### Physical & Chemical Test

	<b>Test Items</b>	<b>Specification</b>	<b>Results</b>
<b>1</b>	Appearance	White or almost white powder or fibrous aggregate	Complies
<b>2</b>	Identification A. Infrared absorption  B. Reaction of sodium	The IR spectrum of the sample exhibits maxima at the same wavelength as that of Ph. Eur. Reference spectrum of hyaluronic acid  Positive	Complies  Positive
<b>3</b>	Appearance of solution	Clear and the absorbance is NMT 0.01 at 600 nm	Clear, A <sub>600</sub> nm=0.002
<b>4</b>	Ph	5.0~8.5(0.5% solution)	7.2
<b>5</b>	Intrinsic viscosity	Actual value	1.88 m <sup>3</sup> /kg
<b>6</b>	Molecular weight	Actual value	1.10×10 <sup>6</sup> Da

### Purity Test

<b>7</b>	Nucleic acids	The absorbance is NMT 0.05 at 260 nm	0.021
<b>8</b>	Protein	≤0.1%	0.077%
<b>9</b>	Chlorides	≤0.5%	<0.5%
<b>10</b>	Loss on drying	≤20%	5.24%
<b>11</b>	Iron	≤80ppm	<80ppm
<b>12</b>	Residual solvents(Ethanol)	≤5000ppm	111ppm
<b>13</b>	Assay	95.0%-105.0%	98.31%

**Bacterial Endotoxins Test**

<b>14</b>	Bacterial endotoxins	$\leq 0.05\text{IU/g}$	$< 0.05\text{IU/g}$
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**Microbiological Test**

<b>15</b>	Total bacterial count	$\leq 100\text{CFU/g}$	$< 20\text{CFU/g}$
<b>16</b>	Yeasts & mold	$\leq 20\text{CFU/g}$	$< 20\text{CFU/g}$
<b>17</b>	E. coli	Negative	Negative
<b>18</b>	Staph	Negative	Negative
<b>19</b>	Pseudomonas aeruginosa	Negative	Negative

**Conclusion: The results meet the requirements of the specifications.**