



武汉福鑫化工有限公司

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CERTIFICATE OF ANALYSIS

Product: D-Glucosamine Sulfate Potassium

Lot No.: 20191102

Mfg. date: Nov., 06, 2019

Quantity: Sample

Exp. date: Nov., 05, 2021

Items	Specifications	Results
Appearance	White Crystalline, Free Flowing Powder	Conforms
Odour	Odourless	Conforms
Bulk Density	NLT 0.85g/ml	0.97g/ml
As Tapped Density	Meets the requirements of USP39	Conforms
Particle Size	NLT 98% through 30 Mesh	Conforms
Assay (HPLC)	98.0%~102.0% (on the dried basis)	99.59%
Identification		
A: Infrared Absorption	Meets the requirement	Conforms
B: Tests for Chloride, Potassium, and Sulfate	Meets the requirement	Conforms
C: Retention time in the Assay	Corresponds to the reference standard	Conforms
Transm	> 90.0% (10.0% Water Solut.-450nm)	97.0%
Specific Rotation (α) D ²⁰	+47.0° ~ +53.0°	+51.84°
pH (20mg/mL aq. sol.)	3.0~5.0	4.61
Loss on Drying	NMT 1.0%	0.01%

Residue on Ignition	26.5%~31.0%	27.72%
Chloride (Cl)	11.3% ~12.3%	11.96%
Content of Sulfate	15.5%~16.5%	15.89%
Potassium	11.7%~13.0%	12.10%
Sodium	Not impart a pronounced yellow color to a nonluminous flame	Conforms
Heavy Metals	NMT 10 ppm	Conforms
Iron (Fe)	NMT 10 ppm	Conforms
Lead	NMT 0.5 ppm	0.09ppm
Arsenic (As)	NMT 1.0 ppm	Conforms
Mercury	NMT 0.1 ppm	0.07ppm
Cd	NMT 0.5ppm	0.06ppm
Organic volatile impurities	Meets the Requirements	Conforms
Residual Solvents (Ethanol)	NMT 0.5%	Conforms
Microbial:		
Total Aerobic	NMT 1,000 cfu/g	NMT 100 cfu/g
Yeast & Mold	NMT 100 cfu/g	NMT 30 cfu/g
E. Coli	Negative in 1g	Negative
Salmonella	Negative in 1g	Negative
Staphylococcus Aureus	Negative in 10g	Negative
Enterobacteria & other gram neg	NMT 100 cfu/g	NMT 30 cfu/g
Conclusion	The product conforms to the standard of USP39.	

QC:

Tester:

Re-tester: