

Certificate of Analysis

Date March 13, 2020

Material:	AMM	D-Mannose, Crystalline	
Batch:	200225-02	Expiry date:	February 24, 2022
Country of Origin:	Finland	Production date:	February 25, 2020

Analysis (Method)	Specification	Result	Unit
Appearance (Visual)	White Crystalline Powder	Complies	
Purity D-Mannose (HPLC)	Min 99 %	99	%/Area
Bulk density	0.33-0.40	Complies	g/ml
Loss on Drying (Oven)	Max 0.5	0.3	%
Residue on Ignition (Ash)	Max 0.2	<0.01	%
Heavy Metals	Max 5	<0.3	
Lead (ICP-MS)	Max 0.3	<0.01	ppm
Arsenic (ICP-MS)	Max 1	0.18	ppm
Cadmium (ICP-MS)	Max 2	<0.005	ppm
Mercury (CVAFS)	Max 0.5	<0.01	ppm

Microbial Limits

Total Count	USP/EP	< 100	complies	CFU/g
Yeast & molds	USP/EP	< 100	complies	CFU/g
S.aureus	USP/EP	ND	ND	in 1g
E.coli	USP/EP	ND	ND	in 1g
Salmonella	USP/EP	ND	ND	in 10g
Gram negative	USP/EP	ND	ND	in 1g

Comments:

Analysis results comply with the specifications. ND = Not Detected

Approved by



Susanne Wiedmer, Director, Quality