

Certificate of Analysis

Date March 26, 2018

Material:	AMM	D-Mannose, Crystalline	
Batch:	180309-11	Expiry date:	March 8, 2020
Country of Origin:	Ireland	Production date:	March 9, 2018

Analysis (Method)	Specification	Result	Unit
Appearance (Visual)	White Crystalline Powder	Complies	
Purity D-Mannose (HPLC)	Min 99 %	99	%/Area
Loss on Drying (Oven)	Max 0.5	0.18	%
Water content (KF)	Max 0.5	0.26	%
Bulk Density (Manual)	0.33-0.40	0.40	g/ml
Residue on Ignition (Ash)	Max 0.2	0.02	%
Heavy Metals (ICP)	Max 5	<0.2	ppm
Lead (ICP-MS)	Max 0.5	<0.005	ppm
Arsenic (ICP-MS)	Max 2	<0.005	ppm
Cadmium (ICP-MS)	Max 2	<0.001	ppm
Mercury (ICP-MS)	Max 0.5	<0.01	ppm

Microbial Limits

Test	Standard	Limit	Result	Unit
Total Count	USP/EP	< 100	<10	CFU/g
Yeast & molds	USP/EP	< 100	<10	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



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Ardilla Technologies Ltd