



Certificate Of Analysis
Manganese Amino Acid Complex (Mn 20%)

FMN0AAP955OK

RI 0243
R20109

Lot # 983022

Date of Manufacture: 12APR2023

Date of Retest: 11APR2026

Product Information:

Shelf life if stored in a cool and dry location: 36 months from date of manufacture.
 Made in U.S.A.
 Date: 01/24/2022 Rev. 4

Product Information: Details, Tests & Methods, Specifications & Limits & Others

Test Description	Test Method	Specification	Result	Units
CHEMICAL				
Manganese	ML-CST-001	20.0 - 24.0	22.9	%
PHYSICAL				
pH (2% Solution)	ML-CST-011	2.0 - 7.0	4.4	
Loss on Drying	USP (Contin 105C, 3g)	NMT 5.00	1.97	%
Bulk Density	USP<616>	Report	1.002	g/mL
Through 18 Mesh	USP<786>	NLT 100.0	100.0	%
Color	Visual	Light Tan~Brown	Pass	
HEAVY METALS				
Arsenic	USP<233> ICP-MS	NMT 1.00	0.07	ppm
Cadmium	USP<233> ICP-MS	NMT 0.50	0.01	ppm
Lead	USP<233> ICP-MS	NMT 0.50	<0.01	ppm
Mercury	USP<233> ICP-MS	NMT 0.34	<0.01	ppm
MICROBIOLOGICAL				
Yeast and Mold	AOAC 997.02	NMT 100	<10	cfu/g
Coliforms	FDA BAM	Negative	Negative	/10g
Enterobacteria	USP<2021>	NMT 100	<100	cfu/g
Total Plate Count	USP<2021>	NMT 3,000	<10	cfu/g
E. coli	USP<2022>	Negative	Negative	/10g
S. aureus	USP<2022>	Negative	Negative	/10g
Salmonella	USP<2022>	Negative	Negative	/25g

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Michael Woodhill

Approved By

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