



VCR# 2062211

Certificate of Analysis

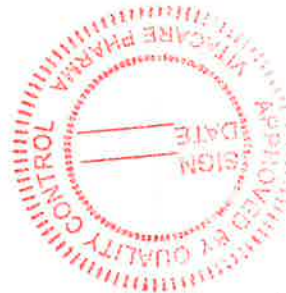


Manganese Ascorbate 13%

Lot Number: T20200518
 Product Code: TMNAS0113
 Country of Origin: USA

Manufacturing Date: May 27, 2020
 Expiration Date: May 27, 2023
 Non-GMO Product: Conforms

Test or Assay	Specification	Result	Method
Chemical and Physical			
Manganese Content	≥13%	14.4%	ICP
Ascorbic Acid Content	≥55%	57.75%	By Input
Appearance	Off White to Light Pink	Complies	Visual
Particle Size	≥85% thru 40 mesh	100%	Rotap
Loss on Drying	≤5%	0.2%	Ohaus MB23 100°C
Heavy Metals			
Lead	<5 ppm	0.01 ppm	ICP-MS
Mercury	<5 ppm	0.03 ppm	ICP-MS
Arsenic	<5 ppm	0.03 ppm	ICP-MS
Cadmium	<5 ppm	0.05 ppm	ICP-MS
Microbiological			
Total Plate Count	<500,000 cfu/g	<10 cfu/g	AOAC 990.12
Yeast and Mold	<5,000 cfu/g	<10/<10 cfu/g	FDA BAM
Coliforms	<10 cfu/g	<10 cfu/g	AOAC 991.14
E. Coli	Negative	Negative	AOAC 991.14
Salmonella	Negative/25 g	Negative/25 g	FDA BAM
Staphylococcus aureus	Negative	Negative	FDA BAM
Pseudomonas aeruginosa	Negative	Negative	USP <62>



Lerli Ostler
 Quality Assurance

6-11-2020
 Date

Manufactured by Biotron Laboratories
 Results provided as supplied by manufacturer and/or independent laboratory testing.