Certificate of Analysis

Item Number	Product Description	Lot Number
CPB-M22080-500GM	CHEMPURE D-Mannitol, 500 G	170171-188301
Formula	**Molecular Weight**	**Cas Number**
$C_6H_{14}O_6$	182.2	69-65-8

QC TEST/RELEASE DATE: 06/09/2022 **SUGGESTED RETEST DATE:** 11/25/2023

S.No	Test	Unit	Specifications	Test Value
1	Appearance		White crystalline powder	passed
2	Appearance of Solution		Clear and colorless solution	Clear and colorless solution
3	Melting Point	°C	165.0 - 170.0	166.2 - 167.3
4	Nickel (Ni)	ppm	≤ 1	< 1
5	Conductivity	µS/cm	≤ 20	1.2
6	Total Yeast and Mold Count (TYMC)	cfu/g	≤ 100	< 10
7	Identification (IR)		Conforms	passed
8	Reducing Sugar	%	≤ 0.1	< 0.1
9	Loss on Drying	%	≤ 0.5	0.14
10	Residual Solvents		Meet requirements	Conforms
11	Bacterial Endotoxins	IU/g	≤ 2.5	< 2.5
12	E.Coli		Negative	passed
13	Total Aerobic Microbial Count (TAMC)	cfu/g	≤ 100	< 10
14	Assay	%	96.0 - 101.5	99.4
15	Related Substance (Maltitol and Isomalt)	%	≤ 2.0	< 2.0
16	Related Substance (Sorbitol)	%	≤ 2.0	< 2.0
17	Related Substance (Total impurity)	%	≤ 2.0	< 2.0
18	Related Substance (Unspecified Impurities)	%	≤ 0.10	< 0.10

19	Specific Optical Rotation (EP)	º	+23 - +25	+24.35
20	Specific Optical Rotation (USP)	°	+137 - +145	+141
21	Non Animal Origin		Conforms	passed
22	Grade		USP/EP	passed

This is to certify that samples of the lot number above were tested and found to comply with the stated specifications. Some or all data have been provided by vendors/third parties. ChemPure Brand Chemicals expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular use or purpose. Certain products (USP/FCC/NF/EP/BP/JP grades) are sold for use in Research and further manufacturing only. **NOT FOR DIRECT USE IN FOOD, DRUG, HUMANS, ANIMALS OR MEDICAL DEVICES.** Persons using this information should make their own determination regarding its suitability for their particular use.

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