

BIOSPECTRA

100 Majestic Way, Bangor, PA 18013 / www.biospectra.us

Effective Date:	28-May-2021	28-May-2024	: Date of Next Review
Prepared By:	Amy Hosein	Not Applicable	: Supersedes
QA/QC Approval:	Carissa McCollan	Amy Yenko	: Management Approval
Reason for Revision:	See Revision History in ensur.		

CERTIFICATE OF ANALYSIS

MES MONOHYDRATE

BIO EXCIPIENT GRADE / MESM-3250-92

LOT: MESM-0121-00119

C₆H₁₃NO₄S·H₂O ^ F.W. 213.3 g/mol. ^ CAS# 145224-94-8

Manufacturing Date: 5/28/21 Retest Date: 5/31/23

Manufacturing Site: 100 Majestic Way, Bangor PA, 18013

Packaging Date: 7/12/21 Packaging Site: 100 Majestic Way, Bangor PA, 18013

ANALYSIS	SPECIFICATION	TEST RESULT	
Absorbance (1M)	260 nm	0.1000 a.u. max.	0.0063 a.u.
	280 nm	0.1000 a.u. max.	0.0050 a.u.
Appearance and Color	White / Crystals	White / Crystals	
Assay	99.0% min.	99.8%	
Chloride	0.005% max.	<0.005%	
Color (1M, Alkaline)	Colorless	Colorless	
Endotoxin	< 50 EU/g	<5 EU/g	
	DNase	None Detected	None Detected
	RNase	None Detected	None Detected
Enzymes	Protease	None Detected	None Detected
Heavy Metals (as Pb)	2 ppm max.	< 2 ppm	
Identification (IR)	Passes Test	Passes Test	
Loss on Drying @ 130°C	7 – 10%	9%	
pH (5% Solution)	3.1 – 3.5	3.3	
pH (0.5M)	2.5 – 4.5	3.2	
pK _a	5.9 – 6.3	6.2	
Residue on Ignition	0.05% max.	<0.01%	
Solubility (5%)	Passes Test	Passes Test	
Sulfate	0.005% max.	<0.005%	
TAMC	≤ 100 CFU/g	<10 CFU/g	
TYMC	≤ 100 CFU/g	<10 CFU/g	
Trace Elements	Arsenic (As)	2 ppm max.	< 2 ppm
	Copper (Cu)	2 ppm max.	< 2 ppm
	Iron (Fe)	2 ppm max.	< 2 ppm
	Lead (Pb)	2 ppm max.	< 2 ppm

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COUNTRY OF ORIGIN: U.S.A.

TEST METHOD REFERENCE: DCN: 16-001016

INTENDED USE: Material represented by this Certificate of Analysis is suitable for use as an excipient. It is manufactured in accordance with the ICH Q7 Good Manufacturing Practice Guide. The material represented by this Certificate of Analysis is not suitable to be used as an Active Pharmaceutical Ingredient, Drug Product or Household Item.

RESIDUAL SOLVENTS STATEMENT: Based on the manufacturing process and the controlled handling, storage and analysis of this product, this product complies with the requirements and specifications listed in the current USP method <467> Tables 1, 2, 3, or 4.

Prepared by: John Hughes Date: 7/14/21 Job Title: QA Specialist

Reviewed by: C. U. Date: 7/14/21 Job Title: QA Manager