



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

Effective Date:	23-Jan-2025	23-Jan-2028	: Date of Next Review
Prepared By:	Amy Yenko	Not Applicable	: Supersedes
QA/QC Approval:	Krista Rehrig	Carissa Albert	: Management Approval
Reason for Revision:	See Revision History in MasterControl		

CERTIFICATE OF ANALYSIS
MES HYDRATE
BIOTECH, LBLE, GMP
BIO PHARMA GRADE / MESH-4250
LOT: MESH-E02-0525-0006

$C_6H_{13}NO_4S \cdot xH_2O$ ^ F.W. 195.24 g/mol. (anhydrous basis) ^ CAS# 1266615-59-1

Manufacturing Date: 1/11/24

Manufacturing Site: 100 Majestic Way, Bangor PA, 18013

Packaging Site: 100 Majestic Way, Bangor PA, 18013

ANALYSIS	SPECIFICATION	TEST RESULT
Absorbance (0.1M)	260 nm 280 nm	≤ 0.04 a.u. ≤ 0.02 a.u.
Appearance	White Powder	White Crystals
Assay, Anhydrous Basis	≥ 99.5 %	99.8 %
Cytotoxicity (50% Concentration)	Passes Test	Passes Test
Enzymes	DNase, Exonuclease	Passes Test
	NICKase, Endonuclease	Passes Test
	RNase	Passes Test
	Protease	Passes Test
Identification, IR	Conforms to Reference Standard	Conforms to Reference Standard
pH (1% solution)	3.5 – 4.1	3.8
Solubility (0.1M)	Clear and Colorless	Clear and Colorless
Microbial Content	TAMC TYMC	≤ 100 CFU/g ≤ 100 CFU/g
		< 10 CFU/g < 10 CFU/g

	ANALYSIS	SPECIFICATION	TEST RESULT
Trace Metals	Aluminum (Al)	≤ 5 ppm	< 1.5 ppm
	Antimony (Sb)	≤ 5 ppm	< 2.7 ppm
	Arsenic (As)	≤ 3 ppm	< 0.45 ppm
	Barium (Ba)	≤ 5 ppm	< 1.5 ppm
	Bismuth (Bi)	≤ 5 ppm	< 3.0 ppm
	Cadmium (Cd)	≤ 5 ppm	< 0.06 ppm
	Calcium (Ca)	≤ 20 ppm	< 1.5 ppm
	Chromium (Cr)	≤ 5 ppm	< 1.5 ppm
	Cobalt (Co)	≤ 5 ppm	< 0.15 ppm
	Copper (Cu)	≤ 5 ppm	< 1.5 ppm
	Iron (Fe)	≤ 5 ppm	< 1.5 ppm
	Lead (Pb)	≤ 5 ppm	< 0.15 ppm
	Lithium (Li)	≤ 5 ppm	< 1.5 ppm
	Manganese (Mn)	≤ 5 ppm	< 1.5 ppm
	Magnesium (Mg)	≤ 5 ppm	< 1.5 ppm
	Molybdenum (Mo)	≤ 5 ppm	< 4.5 ppm
	Nickel (Ni)	≤ 5 ppm	< 0.60 ppm
	Sodium (Na)	≤ 20 ppm	< 15 ppm
	Zinc (Zn)	≤ 5 ppm	< 1.5 ppm
	Water, KF	5.0 – 8.9 %	8.7 %

COUNTRY OF ORIGIN: U.S.A.

TEST METHOD REFERENCE: DCN: BSI-ATM-0123

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

Prepared by: EmG Date: 5/18/25 Job Title: QA Tech I

Reviewed by: Anil McCall Date: 5/18/25 Job Title: QA Tech III