

# BIO SPECTRA

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

Effective Date:	22-Jan-2025	22-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

### MOPS

### BIOTECH, GMP

### BIO PHARMA GRADE / MOPS-4221

### LOT: MOPS-S02-0125-0004

$C_7H_{15}NO_4S$  \* F.W. 209.26 g/mol. \* CAS# 1132-61-2  
 Manufacturing Date: 1/15/25      Retest Date: 1/31/27  
 Manufacturing Site: 1474 Rockdale Lane, Stroudsburg, PA 18360  
 Packaging Site: 100 Majestic Way, Bangor PA, 18013

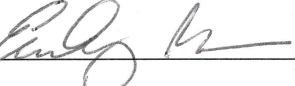
ANALYSIS	SPECIFICATION	TEST RESULT	
Absorbance (0.1M)	250 nm	$\leq 0.020$ a.u.	0.007 a.u.
	260 nm	$\leq 0.020$ a.u.	0.007 a.u.
	280 nm	$\leq 0.020$ a.u.	0.006 a.u.
Appearance and Color	White / Crystals	White / Crystals	
Assay	$\geq 99.5$ %	100.3 %	
Chloride	$\leq 50$ ppm	< 50 ppm	
Enzymes	DNase	None Detected	None Detected
	RNase	None Detected	None Detected
	Protease	None Detected	None Detected
Identification, IR	Conforms to Reference Standard	Conforms to Reference Standard	
Loss on Drying	$\leq 1.0$ %	< 1.0 %	
pH (1% solution)	3.0 - 4.5	4.3	
pH (2.5M)	2.5 - 4.5	3.6	
pK <sub>a</sub>	7.0 - 7.5	7.2	
Residue on Ignition	$\leq 0.1$ %	< 0.1 %	
Solubility (5%)	Passes Test	Passes Test	
Sulfate	$\leq 50$ ppm	< 50 ppm	


ANALYSIS	SPECIFICATION	TEST RESULT
Aluminum (Al)	$\leq 5$ ppm	< 1.5 ppm
Arsenic (As)	$\leq 5$ ppm	< 0.45 ppm
Bismuth (Bi)	$\leq 5$ ppm	< 3.0 ppm
Calcium (Ca)	$\leq 5$ ppm	4.19 ppm
Chromium (Cr)	$\leq 5$ ppm	< 1.5 ppm
Copper (Cu)	$\leq 5$ ppm	< 0.15 ppm
Trace Metals Iron (Fe)	$\leq 5$ ppm	< 0.30 ppm
Lead (Pb)	$\leq 5$ ppm	< 1.0 ppm
Lithium (Li)	$\leq 5$ ppm	< 1.5 ppm
Magnesium (Mg)	$\leq 5$ ppm	0.81 ppm
Molybdenum (Mo)	$\leq 5$ ppm	< 3.0 ppm
Nickel (Ni)	$\leq 5$ ppm	< 0.75 ppm
Water, KF	$\leq 0.1$ %	< 0.05 %

COUNTRY OF ORIGIN: U.S.A.

TEST METHOD REFERENCE: DCN: BSI-ATM-0008

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:  Date: 2/20/25 Job Title: QA Tech 1

Reviewed by:  Date: 2/21/25 Job Title: Senior Quality Manager