

## MES HYDRATE BIOTECH, LBLE, GMP BIO PHARMA GRADE / MESH-4250

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

### Intended for Use in Biopharmaceutical & Biotechnological Applications and Products

MES Hydrate is a zwitterionic buffer that is not absorbed through cell membranes and is virtually transparent in UV light. MES is a buffering agent used in many biopharmaceutical and biotechnological applications. The characteristics of low UV absorptivity, minimal reactivity, stable pH and solubility in water allow MES Hydrate to be used as a Good's buffer.

### SPECIFICATIONS

ANALYSIS		SPECIFICATIONS
Trace Elements	Aluminum (Al)	≤ 5 ppm
	Antimony (Sb)	≤ 5 ppm
	Arsenic (As)	≤ 3 ppm
	Barium (Ba)	≤ 5 ppm
	Bismuth (Bi)	≤ 5 ppm
	Cadmium (Cd)	≤ 5 ppm
	Calcium (Ca)	≤ 20 ppm
	Chromium (Cr)	≤ 5 ppm
	Cobalt (Co)	≤ 5 ppm
	Copper (Cu)	≤ 5 ppm
	Iron (Fe)	≤ 5 ppm
	Lead (Pb)	≤ 5 ppm
	Lithium (Li)	≤ 5 ppm
	Manganese (Mn)	≤ 5 ppm
	Magnesium (Mg)	≤ 5 ppm
	Molybdenum (Mo)	≤ 5 ppm
	Nickel (Ni)	≤ 5 ppm
Sodium (Na)	≤ 20 ppm	
Zinc (Zn)	≤ 5 ppm	
Enzymes	DNase, Exonuclease	Passes Test
	NICKase, Endonuclease	Passes Test
	RNase	Passes Test
	Protease	Passes Test
Absorbance (0.1M)	260 nm	≤ 0.04 a.u.
	280 nm	≤ 0.02 a.u.
Appearance		White Powder
Assay, Anhydrous Basis		≥ 99.5%

Cytotoxicity (50% concentration)		Passes Test
Identification, IR		Conforms to Reference Standard
Solubility (0.1M)		Clear and Colorless
pH (1% solution)		3.5 - 4.1
Microbial Content	TAMC	≤ 100 CFU/g
	TYMC	≤ 100 CFU/g
Water, KF		5.0 – 8.9 %

## General Product Description:

Molecular Formula:  $C_6H_{13}NO_4S \cdot H_2O$

Molecular Weight: 213.25 g/mol

CAS Number: 1266615-59

## MES Hydrate Biotech:

- Appears as a white crystalline product
- Is manufactured under an ICH-Q7 Quality Managed cGMP System
- Manufactured in an enzyme free, hormone free and animal free environment
- Has no known major food allergens (as defined by FDA and WHO)
- The final product nor its raw materials are not derived from nor come into contact with animals, animal parts, animal products, and/or animal byproducts or derivatives.
- Is not subject to genetic modification
- Synonyms: 2-(N-Morpholino) ethane sulfonic acid, 4-Morpholineethanesulfonic acid monohydrate.

## Shelf Life Policy:

Three-year expiry from the date of manufacture.

## Storage and Shipping Conditions:

Please refer to the SDS for storage and shipping conditions.

## Package Size:

100g, 500g, 1kg, 5kg, 10kg, 25kg, 50kg

