



Certificate of Analysis

MES Free Acid Anhydrous

Catalog Number: MA1002
Lot Number: 0307803
CAS Number: 4432-31-9
Synonym(s): 2-(N-Morpholino)ethanesulfonic acid, 4-Morpholineethanesulfonic acid
Molecular Formula: $C_6H_{13}NO_4S$
Molecular Weight: 195.24
Storage: 15°C – 30°C
Date of Manufacture: December 17, 2017
Retest Date: December 16, 2019

Test	Specification	Result
Appearance	White crystalline powder	Conforms
Assay (Titration, Dry Basis)	≥ 99.0%	99.72%
Solubility (10% solution in H ₂ O)	Clear and colorless	Conforms
pH (1% solution in H ₂ O)	2.50 to 4.00	3.71
Moisture (LOD)	≤ 1.0%	0.38%
Heavy Metals (as Pb)	≤ 5ppm	< 5ppm
Absorbance (0.5M)		
260nm	≤ 0.04	0.008
280nm	≤ 0.02	0.007

Approved by:

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Date: March 7, 2018