

MOPS  
Ultrapure Bioreagent

(3-[N-morpholino]-propanesulfonic acid)



Material No.: 4004-01  
Batch No.: 0000032046  
Manufactured Date: 2012/07/24  
Retest Date: 2017/07/23

## Certificate of Analysis

Test	Specification	Result
Assay (C <sub>7</sub> H <sub>15</sub> NO <sub>4</sub> S) (dried basis)	>= 99 %	101
DNase Activity (None Detected)	Passes Test	PT
RNase Activity	Passes Test	PT
Protease Activity	Passes Test	PT
Appearance (white to slightly pink powder to crystalline powder)	Passes Test	PT
pH of 1% Solution at 25°C	2.5 - 4.5	4.4
Solution (10%) in Water	Passes Test	PT
Loss on Drying	<= 1 %	<1
Absorbance of a 0.1M Solution (1-cm path vs water) at - 260 nm	<= 0.020	0.008
Trace Impurities - ACS - Heavy Metals (as Pb)	<= 5 ppm	< 3
Trace Impurities - Iron (Fe)	<= 5 ppm	< 3

For Laboratory, Research or Manufacturing Use  
pKa at 20 degrees C (typical) = 7.20

Country of Origin: CN  
Packaging Site: Paris Mfg Ctr & DC



Phillipsburg, NJ 9001:2008, 14001:2004  
Paris, KY 9001:2008  
Mexico City, Mexico 9001:2008  
Deventer, The Netherlands 9001:2008, 14001:2004, 13485:2003  
Gliwice, Poland 9001:2008, 17025:2005  
Selangor, Malaysia 9001:2008  
Dehradun, India, 9001:2008, 14001:2004, 13485:2003  
Mumbai, India, 9001:2008, 17025:2005  
Panoli, India 9001:2008

Richard M Siberski  
Global Director of Quality Assurance

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.573.2600  
Avantor™ Performance Materials Inc.

3477 Corporate Parkway, Suite #200, Center Valley, PA 18034, U.S.A. Phone: 610.573.2600 . Fax: 610.573.2610