

TRIS Hydrochloride  
Biotech Reagent  
Made from Tromethamine USP



Material No.: 4106-01  
Batch No.: 0000179244  
Manufactured Date: 2017/05/18  
Retest Date: 2022/05/17

## Certificate of Analysis

GMP Manufactured Product

Test	Specification	Result
Assay (NH <sub>2</sub> C(CH <sub>2</sub> OH) <sub>3</sub> · HCl)	>= 99.0 %	99.8
Appearance (colorless crystals to white crystalline powder)	Passes Test	PT
Absorbance of a 1M Solution – 260 nm	<= 0.06	< 0.06
Absorbance of a 1M Solution – 280 nm	<= 0.06	< 0.06
Absorbance of a 1M Solution – 400 nm	<= 0.01	< 0.01
Identification (by IR)	Passes Test	PT
Loss on Drying at 105°C	<= 0.5 %	0.3
Endotoxin Concentration (EU/g)	<= 2.5	< 1.0
Melting Point	147 – 153 °C	151
pH of 0.5M Solution at 25°C	3.5 – 5.0	4.2
Trace Impurities – Arsenic (As)	<= 10 ppm	< 1
Trace Impurities – Calcium (Ca)	<= 10 ppm	< 1
Trace Impurities – Copper (Cu)	<= 10 ppm	< 1
Trace Impurities – Iron (Fe)	<= 10 ppm	< 1
Trace Impurities – Lead (Pb)	<= 10 ppm	< 1
Trace Impurities – Magnesium (Mg)	<= 10 ppm	< 1

CAUTION: For Manufacturing, processing or repackaging  
No Class 1,2,3 or other solvents are used or produced in the  
manufacturing or purification of the product.  
Manufactured exclusively for Avantor Performance Materials, LLC., by  
BioSpectra, Inc., Stroudsburg, PA

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.573.2600  
Avantor Performance Materials, LLC.  
3477 Corporate Parkway. Center Valley, PA 18034. U.S.A. Phone: 610.573.2600 . Fax: 610.573.2610

Material No.: 4106-01  
Batch No.: 0000179244

Country of Origin: US  
Packaging Site: Paris Mfg Ctr & DC  
Manufacturer: P0064001  
Manufacturer source batch: TH7201-117-0517

ISO

Phillipsburg, NJ 9001:2008, 14001:2004, FSSC 22000  
Paris, KY 9001:2008  
Mexico City, Mexico 9001:2008  
Deventer, The Netherlands 9001:2008, 14001:2004, 13485:2003  
Gliwice, Poland 9001:2008, 13485:2012  
Selangor, Malaysia 9001:2008  
Dehradun, India, 9001:2008, 14001:2004, 13485:2003  
Mumbai, India, 9001:2008  
Panoli, India 9001:2008

*James Ethier*  
Jamie Ethier  
Vice President Global Quality

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

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