

Material No.: 4042-02 Batch No.: 0000168745 Manufactured Date: 2016/08/10

Retest Date: 2021/08/09

## Certificate of Analysis

Test	Specification	Result
Assay (as CsCl)	>= 99.9 %	100.0
Absorbance of 50% w/v Aqueous Solution at 260 nm	<= 0.020	0.003
(1-cm path)		
RNase Activity	Passes Test	PT
DNase Activity (None Detected)	Passes Test	PT
Protease Activity	Passes Test	PT
ACS - Sulfate (SO <sub>4</sub> )	<= 5 ppm	< 5
Trace Impurities – Aluminum (Al)	<= 10.0 ppm	< 0.2
Trace Impurities – Barium (Ba)	<= 5.0 ppm	< 0.2
Trace Impurities – Calcium (Ca)	<= 10.0 ppm	< 0.1
Trace Impurities – Chromium (Cr)	<= 5.0 ppm	< 0.2
Trace Impurities - Copper (Cu)	<= 3.0 ppm	< 0.1
Trace Impurities - Iron (Fe)	<= 2.0 ppm	< 0.2
Trace Impurities - Lead (Pb)	<= 5.0 ppm	< 0.2
Trace Impurities – Lithium (Li)	<= 5.0 ppm	< 1.0
Trace Impurities – Magnesium (Mg)	<= 3.0 ppm	0.3
Trace Impurities – Manganese (Mn)	<= 5.0 ppm	< 0.1
Trace Impurities – Potassium (K)	ppm	0.6
Trace Impurities - Rubidium (Rb)	<= 10.0 ppm	< 1.3
Trace Impurities – Sodium (Na)	ppm	3.0
Trace Impurities – Strontium (Sr)	<= 5.0 ppm	< 0.2

For Laboratory, Research or Manufacturing Use

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Country of Origin: DE



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

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