

Material No.: 2204-01 Batch No.: 0000201043

Manufactured Date: 2018/05/18 Expiration Date: 2019/11/16

Revision No: 1

Certificate of Analysis

Test	Specification	Result
Assay (H2O2)	30.0 - 32.0 %	31.6
Color (APHA)	<= 10	5
Free Acid (µeq/g)	<= 0.2	< 0.2
Residue after Evaporation	<= 15 ppm	2
Ammonium (NH4)	<= 3 ppm	< 3
Chloride (Cl)	<= 2 ppm	< 2
Nitrate (NO3)	<= 2 ppm	< 2
Phosphate (PO ₄)	<= 2 ppm	< 2
ACS – Sulfate (SO ₄)	<= 5 ppm	< 5
Trace Impurities – Aluminum (Al)	<= 200.0 ppb	10.9
Trace Impurities – Antimony (Sb)	<= 10.0 ppb	< 1.0
Trace Impurities – Arsenic (As)	<= 10.0 ppb	< 2.0
Arsenic and Antimony (as As)	<= 10 ppb	< 10
Trace Impurities – Barium (Ba)	<= 20.0 ppb	< 1.0
Trace Impurities – Beryllium (Be)	<= 10.0 ppb	< 1.0
Trace Impurities – Bismuth (Bi)	<= 20.0 ppb	< 10.0
Trace Impurities – Boron (B)	<= 10.0 ppb	< 5.0
Trace Impurities – Cadmium (Cd)	<= 10.0 ppb	< 1.0
Trace Impurities – Calcium (Ca)	<= 50.0 ppb	< 1.0
Trace Impurities – Chromium (Cr)	<= 20.0 ppb	3.1
Trace Impurities – Cobalt (Co)	<= 10.0 ppb	< 1.0
Trace Impurities – Copper (Cu)	<= 10.0 ppb	< 1.0
Frace Impurities – Gallium (Ga)	<= 20.0 ppb	< 1.0
Trace Impurities – Germanium (Ge)	<= 10.0 ppb	< 10.0

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Trace Impurities – Gold (Au)	<= 10.0 ppb	< 5.0
Heavy Metals (as Pb)	<= 500 ppb	< 250
Trace Impurities – Iron (Fe)	<= 50.0 ppb	5.6
Trace Impurities – Lead (Pb)	<= 10.0 ppb	< 10.0
Trace Impurities – Lithium (Li)	<= 10.0 ppb	< 1.0
Trace Impurities – Magnesium (Mg)	<= 10.0 ppb	< 1.0
Trace Impurities – Manganese (Mn)	<= 10.0 ppb	< 1.0
Trace Impurities – Molybdenum (Mo)	<= 10.0 ppb	< 5.0
Trace Impurities – Nickel (Ni)	<= 10.0 ppb	< 5.0
Trace Impurities – Niobium (Nb)	<= 10.0 ppb	< 1.0
Trace Impurities – Potassium (K)	<= 600.0 ppb	162.7
Trace Impurities – Silicon (Si)	<= 100.0 ppb	< 10.0
Trace Impurities – Silver (Ag)	<= 10.0 ppb	< 1.0
Trace Impurities – Sodium (Na)	<= 500.0 ppb	< 5.0
Trace Impurities – Strontium (Sr)	<= 10.0 ppb	< 1.0
Trace Impurities – Tantalum (Ta)	<= 10.0 ppb	< 5.0
Trace Impurities – Thallium (TI)	<= 50.0 ppb	< 5.0
Trace Impurities – Tin (Sn)	<= 1000.0 ppb	271.9
Trace Impurities – Titanium (Ti)	<= 10.0 ppb	< 1.0
Trace Impurities – Vanadium (V)	<= 10.0 ppb	< 1.0
Trace Impurities – Zinc (Zn)	<= 50.0 ppb	< 1.0
Trace Impurities – Zirconium (Zr)	<= 10.0 ppb	< 1.0

For Microelectronic Use

Country of Origin: US

Packaging Site: Paris Mfg Ctr & DC



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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