

## Certificate of Analysis

Test	Specification	Result
Assay (CH <sub>3</sub> COOH) (by freezing point)	≥ 99.7 %	99.9 %
Color (APHA)	≤ 10	5
Acetic Anhydride ((CH <sub>3</sub> CO) <sub>2</sub> O)	≤ 0.01 %	< 0.01 %
Acetaldehyde	≤ 0.05 %	< 0.01 %
Residue after Evaporation	≤ 4 ppm	< 1 ppm
Solubility in H <sub>2</sub> O	Passes Test	Passes Test
Specific Gravity at 20°/20°C	≥ 1.048	1.051
Substances Reducing Dichromate	Passes Test	Passes Test
Substances Reducing Permanganate	Passes Test	Passes Test
Chloride (Cl)	≤ 0.5 ppm	< 0.4 ppm
Phosphate (PO <sub>4</sub> )	≤ 0.5 ppm	< 0.5 ppm
Sulfate (SO <sub>4</sub> )	≤ 0.5 ppm	< 0.3 ppm
Trace Impurities - Aluminum (Al)	≤ 50.0 ppb	< 5.0 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 5.0 ppb
Trace Impurities - Barium (Ba)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Beryllium (Be)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Bismuth (Bi)	≤ 50 ppb	< 10 ppb
Trace Impurities - Boron (B)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities - Cadmium (Cd)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Calcium (Ca)	≤ 200.0 ppb	75.0 ppb
Trace Impurities - Chromium (Cr)	≤ 30.0 ppb	4.0 ppb
Trace Impurities - Cobalt (Co)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Copper (Cu)	≤ 20.0 ppb	2.0 ppb
Trace Impurities - Gallium (Ga)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Germanium (Ge)	≤ 10.0 ppb	< 10.0 ppb
Trace Impurities - Gold (Au)	≤ 10.0 ppb	< 5.0 ppb
Heavy Metals (as Pb)	≤ 300.0 ppb	< 300.0 ppb
Trace Impurities - Iron (Fe)	≤ 100.0 ppb	13.0 ppb

>>> Continued on page 2 >>>

Test	Specification	Result
Trace Impurities – Lead (Pb)	≤ 100 ppb	< 10 ppb
Trace Impurities – Lithium (Li)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Magnesium (Mg)	≤ 50.0 ppb	9.0 ppb
Trace Impurities – Manganese (Mn)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Molybdenum (Mo)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Nickel (Ni)	≤ 25.0 ppb	< 5.0 ppb
Trace Impurities – Niobium (Nb)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Potassium (K)	≤ 100 ppb	< 10 ppb
Trace Impurities – Silicon (Si)	≤ 50 ppb	< 10 ppb
Trace Impurities – Silver (Ag)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Sodium (Na)	≤ 100.0 ppb	6.0 ppb
Trace Impurities – Strontium (Sr)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Tantalum (Ta)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Thallium (Tl)	≤ 50.0 ppb	< 5.0 ppb
Trace Impurities – Tin (Sn)	≤ 50 ppb	< 10 ppb
Trace Impurities – Titanium (Ti)	≤ 100.0 ppb	< 1.0 ppb
Trace Impurities – Vanadium (V)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Zinc (Zn)	≤ 50 ppb	8 ppb
Trace Impurities – Zirconium (Zr)	≤ 10.0 ppb	< 1.0 ppb
Particle Count – 1.0 µm and greater	≤ 10 par/ml	9 par/ml

>>> Continued on page 3 >>>

Acetic Acid, Glacial  
CMOS



Material No.: 9503-03  
Batch No.: 24C2562002

Test	Specification	Result
------	---------------	--------

For Microelectronic Use

For additional information, go to [www.askavantor.com](http://www.askavantor.com). Search keywords "freezing" and product name.

Storage Condition: IMPORTANT: Material will freeze if stored below 17 °C (63°F).

Country of Origin: USA

Packaging Site: Phillipsburg Mfg Ctr & DC

Jamie Croak  
Director Quality Operations, Bioscience Production

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700  
Avantor Performance Materials, LLC

100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone 610.386.1700