

Certificate of Analysis

Test	Specification	Result
Assay ((CH ₃) ₂ CO) (by GC, corrected for water)	>= 99.5 %	99.8
Color (APHA)	<= 10	< 5
Residue after Evaporation	<= 5 ppm	< 1
Acidity (µeq/g)	<= 0.3	0.2
Alkalinity (µeq/g)	<= 0.5	0.1
Water (H ₂ O)	<= 0.5 %	0.2
Solubility in H ₂ O	Passes Test	PT
Chloride (Cl)	<= 0.2 ppm	< 0.2
Phosphate (PO ₄)	<= 0.05 ppm	< 0.05
Trace Impurities – Aluminum (Al)	<= 50.0 ppb	< 5.0
Arsenic and Antimony (as As)	<= 5 ppb	< 5
Trace Impurities – Barium (Ba)	<= 20.0 ppb	< 1.0
Trace Impurities – Boron (B)	<= 20.0 ppb	< 5.0
Trace Impurities – Calcium (Ca)	<= 25.0 ppb	3.3
Trace Impurities – Chromium (Cr)	<= 20.0 ppb	< 1.0
Trace Impurities – Copper (Cu)	<= 10.0 ppb	< 1.0
Trace Impurities – Gold (Au)	<= 20.0 ppb	< 5.0
Trace Impurities – Iron (Fe)	<= 20.0 ppb	< 1.0
Trace Impurities – Lead (Pb)	<= 20.0 ppb	< 10.0
Trace Impurities – Lithium (Li)	<= 50.0 ppb	< 1.0
Trace Impurities – Magnesium (Mg)	<= 20.0 ppb	< 1.0
Trace Impurities – Manganese (Mn)	<= 10.0 ppb	< 1.0
Trace Impurities – Nickel (Ni)	<= 10.0 ppb	< 5.0
Trace Impurities – Potassium (K)	<= 50.0 ppb	< 10.0

Test	Specification	Result
Trace Impurities – Sodium (Na)	<= 50.0 ppb	< 5.0
Trace Impurities – Tin (Sn)	<= 50.0 ppb	< 10.0
Trace Impurities – Titanium (Ti)	<= 20.0 ppb	< 1.0
Trace Impurities – Zinc (Zn)	<= 50.0 ppb	1.0
Particle Count – 0.5 µm and greater	<= 60 par/ml	6
Particle Count – 1.0 µm and greater	<= 8 par/ml	3

For Microelectronic Use

Reported value is the average of all samples counted for this lot number, with no individual sample value exceeding the specification.

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



Jamie Ethier
Vice President Global Quality