

Material No.: 6900-05
Batch No.: 4221050
Manufactured Date: 2021/05/27
Expiration Date: 2024/05/27
Revision No: 1

Certificate of Analysis

Test	Specification	Result
Assay (HCl)(w/w)	32 - 35 %	33
Trace Impurities - Aluminum (Al)	<= 20 ppt	< 2
Trace Impurities - Antimony (Sb)	<= 20 ppt	< 1
Trace Impurities - Arsenic (As)	<= 50 ppt	< 1
Trace Impurities - Barium (Ba)	<= 10 ppt	< 1
Trace Impurities - Beryllium (Be)	<= 10 ppt	< 1
Trace Impurities - Bismuth (Bi)	<= 10 ppt	< 1
Trace Impurities - Boron (B)	<= 100 ppt	< 10
Trace Impurities - Cadmium (Cd)	<= 10 ppt	< 1
Trace Impurities - Calcium (Ca)	<= 10 ppt	< 10
Trace Impurities - Cerium (Ce)	<= 10 ppt	< 1
Trace Impurities - Cesium (Cs)	<= 10 ppt	< 1
Trace Impurities - Chromium (Cr)	<= 10 ppt	< 1
Trace Impurities - Cobalt (Co)	<= 10 ppt	< 1
Trace Impurities - Copper (Cu)	<= 10 ppt	< 5
Trace Impurities - Dysprosium (Dy)	<= 1 ppt	< 1
Trace Impurities - Erbium (Er)	<= 1 ppt	< 1
Trace Impurities - Europium (Eu)	<= 1 ppt	< 1
Trace Impurities - Gadolinium (Gd)	<= 1 ppt	< 1
Trace Impurities - Gallium (Ga)	<= 10 ppt	< 1
Trace Impurities - Gold (Au)	<= 50 ppt	< 5
Trace Impurities - Hafnium (Hf)	<= 10 ppt	< 1
Trace Impurities - Holmium (Ho)	<= 1 ppt	< 1
Trace Impurities - Indium (In)	<= 1 ppt	< 1

Test	Specification	Result
Trace Impurities – Iron (Fe)	<= 10 ppt	< 2
Trace Impurities – Lanthanum (La)	<= 1 ppt	< 1
Trace Impurities – Lead (Pb)	<= 10 ppt	< 1
Trace Impurities – Lithium (Li)	<= 10 ppt	< 1
Trace Impurities – Lutetium (Lu)	<= 10 ppt	< 1
Trace Impurities – Magnesium (Mg)	<= 10 ppt	< 1
Trace Impurities – Manganese (Mn)	<= 10 ppt	< 1
Trace Impurities – Mercury (Hg)	<= 50 ppt	< 20
Trace Impurities – Molybdenum (Mo)	<= 10 ppt	< 1
Trace Impurities – Neodymium (Nd)	<= 1 ppt	< 1
Trace Impurities – Nickel (Ni)	<= 20 ppt	< 5
Trace Impurities – Niobium (Nb)	<= 1 ppt	< 1
Trace Impurities – Palladium (Pd), For Information Only	µg/ml	< 1
Trace Impurities – Platinum (Pt), For Information Only	ppt	1
Trace Impurities – Potassium (K)	<= 10 ppt	< 1
Trace Impurities – Praseodymium (Pr)	<= 1 ppt	< 1
Trace Impurities – Rhenium (Re)	<= 10 ppt	< 1
Trace Impurities – Rhodium (Rh)	<= 10 ppt	< 1
Trace Impurities – Rubidium (Rb)	<= 10 ppt	< 1
Trace Impurities – Ruthenium (Ru)	<= 10 ppt	< 1
Trace Impurities – Samarium (Sm)	<= 1 ppt	< 1
Trace Impurities – Scandium (Sc)	<= 10 ppt	< 1
Trace Impurities – Selenium (Se), For Information Only	ppt	20
Trace Impurities – Silver (Ag)	<= 10 ppt	< 1
Trace Impurities – Sodium (Na)	<= 10 ppt	< 1
Trace Impurities – Strontium (Sr)	<= 10 ppt	< 1
Trace Impurities – Tantalum (Ta), For Information Only	ppt	1
Trace Impurities – Tellurium (Te)	<= 1 ppt	< 1
Trace Impurities – Terbium (Tb)	<= 1 ppt	< 1
Trace Impurities – Thallium (Tl)	<= 10 ppt	< 1
Trace Impurities – Thorium (Th)	<= 1 ppt	< 1
Trace Impurities – Thulium (Tm)	<= 1 ppt	< 1
Trace Impurities – Tin (Sn)	<= 20 ppt	< 1
Trace Impurities – Titanium (Ti)	<= 10 ppt	< 1
Trace Impurities – Tungsten (W)	<= 10 ppt	< 1
Trace Impurities – Uranium (U)	<= 1 ppt	< 1

Test	Specification	Result
Trace Impurities – Vanadium (V)	<= 10 ppt	< 1
Trace Impurities – Ytterbium (Yb)	<= 1 ppt	< 1
Trace Impurities – Yttrium (Y)	<= 1 ppt	< 1
Trace Impurities – Zinc (Zn)	<= 10 ppt	< 1
Trace Impurities – Zirconium (Zr)	<= 10 ppt	< 1

For Laboratory, Research or Manufacturing Use
Certificate Provided Reports Actual Lot Analysis
Storage Conditions: Store below 25°C
Country of Origin: CA
Packaging Site: Paris Mfg Ctr & DC



Jamie Ethier
Vice President Global Quality