

## **Gold Oxide Ore (Andy Well Gold Mine, Western Australia), Certified Reference Material**

Art. ID                    OREAS-251b-1KG  
Unit                        1 kg  
Deliverydetails        No Dangerous Good /not restricted

Text/Information	Analyte/Parameter	CAS number	Concentration/Value	Unit	Method	Source
Gold	Gold (Au)	[7440-57-5]	0,505 Å± 0,017	ppm	Pb Fire As say	
Gold	Gold (Au)	[7440-57-5]	0,497 Å± 0,022	ppm	Aqua Regia Digestion (sample w eights 10- 50g)	
Gold	Gold (Au)	[7440-57-5]	0,491 Å± 0,028	ppm	Cyanide Le ach	
Gold	Gold (Au)	[7440-57-5]	0,495 Å± 0,028	ppm	X-ray Phot on Assay	
Silver	Silver (Ag)	[7440-22-4]	0,123 Å± 0,017	ppm	4-Acid Dig estion	
Aluminium	Aluminium (Al)	[7429-90-5]	4,8 Å± 0,114	%	4-Acid Dig estion	
Arsenic	Arsenic (As)	[7440-38-2]	12,9 Å± 0,56	ppm	4-Acid Dig estion	
Barium	Barium (Ba)	[7440-39-3]	311 Å± 14	ppm	4-Acid Dig estion	
Beryllium	Beryllium (Be)	[7440-41-7]	1,25 Å± 0,079	ppm	4-Acid Dig estion	
Bismuth	Bismuth (Bi)	[7440-69-9]	0,31 Å± 0,026	ppm	4-Acid Dig estion	
Calcium	Calcium (Ca)	[7440-70-2]	2,01 Å± 0,073	%	4-Acid Dig estion	
Cadmium	Cadmium (Cd)	[7440-43-9]	0,027 Å± 0,008	ppm	4-Acid Dig estion	
Cerium	Cerium (Ce)	[7440-45-1]	51 Å± 4,8	ppm	4-Acid Dig estion	
Cobalt	Cobalt (Co)	[7440-48-4]	18 Å± 0,73	ppm	4-Acid Dig estion	

Chromium	Chromium (Cr)	[7440-47-3]	115 Å± 11	ppm	4-Acid Digestion
Caesium	Caesium (Cs)	[7440-46-2]	2,8 Å± 0,161	ppm	4-Acid Digestion
Copper	Copper (Cu)	[7440-50-8]	26,7 Å± 2,35	ppm	4-Acid Digestion
Dysprosium	Dysprosium (Dy)	[7429-91-6]	3,14 Å± 0,286	ppm	4-Acid Digestion
Erbium	Erbium (Er)	[7440-52-0]	1,54 Å± 0,18	ppm	4-Acid Digestion
Europium	Europium (Eu)	[7440-53-1]	1,1 Å± 0,055	ppm	4-Acid Digestion
Iron	Iron (Fe)	[7439-89-6]	3,69 Å± 0,098	%	4-Acid Digestion
Gallium	Gallium (Ga)	[7440-55-3]	12,6 Å± 1,03	ppm	4-Acid Digestion
Gadolinium	Gadolinium (Gd)	[7440-54-2]	4,03 Å± 0,21	ppm	4-Acid Digestion
Germanium	Germanium (Ge)	[7440-56-4]	0,11 Å± 0,02	ppm	4-Acid Digestion
Hafnium	Hafnium (Hf)	[7440-58-6]	2,94 Å± 0,266	ppm	4-Acid Digestion
Holmium	Holmium (Ho)	[7440-60-0]	0,57 Å± 0,05	ppm	4-Acid Digestion
Indium	Indium (In)	[7440-74-6]	0,065 Å± 0,005	ppm	4-Acid Digestion
Potassium	Potassium (K)	[7440-09-7]	1,17 Å± 0,036	%	4-Acid Digestion
Lanthanum	Lanthanum (La)	[7439-91-0]	25,8 Å± 1,79	ppm	4-Acid Digestion
Lithium	Lithium (Li)	[7439-93-2]	21 Å± 1,66	ppm	4-Acid Digestion
Lutetium	Lutetium (Lu)	[7439-94-3]	0,2 Å± 0,014	ppm	4-Acid Digestion
Magnesium	Magnesium (Mg)	[7439-95-4]	1,67 Å± 0,063	%	4-Acid Digestion
Manganese	Manganese (Mn)	[7439-96-5]	0,042 Å± 0,001	%	4-Acid Digestion

Molybdenum	Molybdenum (Mo)	[7439-98-7]	1,84 Å± 0,106	ppm	4-Acid Digestion
Sodium	Sodium (Na)	[7440-23-5]	0,774 Å± 0,024	%	4-Acid Digestion
Niobium	Niobium (Nb)	[7440-03-1]	14,4 Å± 1,5	ppm	4-Acid Digestion
Neodymium	Neodymium (Nd)	[7440-00-8]	23,7 Å± 0,85	ppm	4-Acid Digestion
Nickel	Nickel (Ni)	[7440-02-0]	72 Å± 3,5	ppm	4-Acid Digestion
Phosphorus	Phosphorus (P)	[7723-14-0]	0,07 Å± 0,001	%	4-Acid Digestion
Lead	Lead (Pb)	[7439-92-1]	9,06 Å± 0,718	ppm	4-Acid Digestion
Praseodymium	Praseodymium (Pr)	[7440-10-0]	6,21 Å± 0,245	ppm	4-Acid Digestion
Rubidium	Rubidium (Rb)	[7440-17-7]	63 Å± 2,6	ppm	4-Acid Digestion
Rhenium	Rhenium (Re)	[7440-15-5]	<0,002	ppm	4-Acid Digestion
Sulphur	Sulfur (S)	[7704-34-9]	0,017 Å± 0,004	%	4-Acid Digestion
Antimony	Antimony (Sb)	[7440-36-0]	0,79 Å± 0,071	ppm	4-Acid Digestion
Scandium	Scandium (Sc)	[7440-20-2]	9,68 Å± 0,574	ppm	4-Acid Digestion
Selenium	Selenium (Se)	[7782-49-2]	<1,00	ppm	4-Acid Digestion
Samarium	Samarium (Sm)	[7440-19-9]	4,72 Å± 0,221	ppm	4-Acid Digestion
Tin	Tin (Sn)	[7440-31-5]	3,65 Å± 0,327	ppm	4-Acid Digestion
Strontium	Strontium (Sr)	[7440-24-6]	196 Å± 8	ppm	4-Acid Digestion
Tantalum	Tantalum (Ta)	[7440-25-7]	1,03 Å± 0,082	ppm	4-Acid Digestion
Terbium	Terbium (Tb)	[7440-27-9]	0,58 Å± 0,038	ppm	4-Acid Digestion

Tellurium	Tellurium (Te)	[13494-80-9]	<0,050	ppm	4-Acid Digestion
Thorium	Thorium (Th)	[7440-29-1]	8,65 $\hat{A}\pm$ 0,589	ppm	4-Acid Digestion
Titanium	Titanium (Ti)	[7440-32-6]	0,481 $\hat{A}\pm$ 0,02	%	4-Acid Digestion
Thallium	Thallium (Tl)	[7440-28-0]	0,35 $\hat{A}\pm$ 0,021	ppm	4-Acid Digestion
Thulium	Thulium (Tm)	[7440-30-4]	0,21 $\hat{A}\pm$ 0,02	ppm	4-Acid Digestion
Uranium	Uranium (U)	[7440-61-1]	1,27 $\hat{A}\pm$ 0,079	ppm	4-Acid Digestion
Vanadium	Vanadium (V)	[7440-62-2]	75 $\hat{A}\pm$ 3,5	ppm	4-Acid Digestion
Tungsten	Tungsten (W)	[7440-33-7]	1,97 $\hat{A}\pm$ 0,22	ppm	4-Acid Digestion
Yttrium	Yttrium (Y)	[7440-65-5]	15,2 $\hat{A}\pm$ 1,13	ppm	4-Acid Digestion
Ytterbium	Ytterbium (Yb)	[7440-64-4]	1,39 $\hat{A}\pm$ 0,16	ppm	4-Acid Digestion
Zinc	Zinc (Zn)	[7440-66-6]	60 $\hat{A}\pm$ 3,1	ppm	4-Acid Digestion
Zirconium	Zirconium (Zr)	[7440-67-7]	108 $\hat{A}\pm$ 9	ppm	4-Acid Digestion
Silver	Silver (Ag)	[7440-22-4]	0,104 $\hat{A}\pm$ 0,01	ppm	Aqua Regia Digestion
Aluminium	Aluminium (Al)	[7429-90-5]	0,871 $\hat{A}\pm$ 0,126	%	Aqua Regia Digestion
Arsenic	Arsenic (As)	[7440-38-2]	6,01 $\hat{A}\pm$ 0,62	ppm	Aqua Regia Digestion
Boron	Boron (B)	[7440-42-8]	<10,0	ppm	Aqua Regia Digestion
Barium	Barium (Ba)	[7440-39-3]	67 $\hat{A}\pm$ 3,7	ppm	Aqua Regia Digestion
Beryllium	Beryllium (Be)	[7440-41-7]	0,39 $\hat{A}\pm$ 0,025	ppm	Aqua Regia Digestion
Bismuth	Bismuth (Bi)	[7440-69-9]	0,29 $\hat{A}\pm$ 0,015	ppm	Aqua Regia Digestion

Calcium	Calcium (Ca)	[7440-70-2]	0,593 $\hat{A}\pm$ 0,051	%	Aqua Regia Digestion
Cadmium	Cadmium (Cd)	[7440-43-9]	0,016 $\hat{A}\pm$ 0,006	ppm	Aqua Regia Digestion
Cerium	Cerium (Ce)	[7440-45-1]	31,2 $\hat{A}\pm$ 2,26	ppm	Aqua Regia Digestion
Cobalt	Cobalt (Co)	[7440-48-4]	12,2 $\hat{A}\pm$ 1,5	ppm	Aqua Regia Digestion
Chromium	Chromium (Cr)	[7440-47-3]	52 $\hat{A}\pm$ 4,7	ppm	Aqua Regia Digestion
Caesium	Caesium (Cs)	[7440-46-2]	0,72 $\hat{A}\pm$ 0,1	ppm	Aqua Regia Digestion
Copper	Copper (Cu)	[7440-50-8]	19,4 $\hat{A}\pm$ 1,59	ppm	Aqua Regia Digestion
Dysprosium	Dysprosium (Dy)	[7429-91-6]	1,6 $\hat{A}\pm$ 0,084	ppm	Aqua Regia Digestion
Erbium	Erbium (Er)	[7440-52-0]	0,71 $\hat{A}\pm$ 0,054	ppm	Aqua Regia Digestion
Europium	Europium (Eu)	[7440-53-1]	0,63 $\hat{A}\pm$ 0,057	ppm	Aqua Regia Digestion
Iron	Iron (Fe)	[7439-89-6]	2,36 $\hat{A}\pm$ 0,195	%	Aqua Regia Digestion
Gallium	Gallium (Ga)	[7440-55-3]	2,75 $\hat{A}\pm$ 0,42	ppm	Aqua Regia Digestion
Gadolinium	Gadolinium (Gd)	[7440-54-2]	2,43 $\hat{A}\pm$ 0,26	ppm	Aqua Regia Digestion
Germanium	Germanium (Ge)	[7440-56-4]	<0,10	ppm	Aqua Regia Digestion
Hafnium	Hafnium (Hf)	[7440-58-6]	0,41 $\hat{A}\pm$ 0,05	ppm	Aqua Regia Digestion
Mercury	Mercury (Hg)	[7439-97-6]	0,018 $\hat{A}\pm$ 0,006	ppm	Aqua Regia Digestion
Holmium	Holmium (Ho)	[7440-60-0]	0,28 $\hat{A}\pm$ 0,02	ppm	Aqua Regia Digestion
Indium	Indium (In)	[7440-74-6]	0,024 $\hat{A}\pm$ 0,004	ppm	Aqua Regia Digestion
Potassium	Potassium (K)	[7440-09-7]	0,133 $\hat{A}\pm$ 0,023	%	Aqua Regia Digestion

Lanthanum	Lanthanum (La)	[7439-91-0]	14,8 $\hat{\pm}$ 1,35	ppm	Aqua Regia Digestion
Lithium	Lithium (Li)	[7439-93-2]	7,57 $\hat{\pm}$ 1,05	ppm	Aqua Regia Digestion
Lutetium	Lutetium (Lu)	[7439-94-3]	0,073 $\hat{\pm}$ 0,005	ppm	Aqua Regia Digestion
Magnesium	Magnesium (Mg)	[7439-95-4]	0,704 $\hat{\pm}$ 0,067	%	Aqua Regia Digestion
Manganese	Manganese (Mn)	[7439-96-5]	0,021 $\hat{\pm}$ 0,002	%	Aqua Regia Digestion
Molybdenum	Molybdenum (Mo)	[7439-98-7]	1,28 $\hat{\pm}$ 0,079	ppm	Aqua Regia Digestion
Sodium	Sodium (Na)	[7440-23-5]	0,088 $\hat{\pm}$ 0,014	%	Aqua Regia Digestion
Niobium	Niobium (Nb)	[7440-03-1]	0,37 $\hat{\pm}$ 0,08	ppm	Aqua Regia Digestion
Neodymium	Neodymium (Nd)	[7440-00-8]	15,2 $\hat{\pm}$ 1,46	ppm	Aqua Regia Digestion
Nickel	Nickel (Ni)	[7440-02-0]	57 $\hat{\pm}$ 3,3	ppm	Aqua Regia Digestion
Phosphorus	Phosphorus (P)	[7723-14-0]	0,051 $\hat{\pm}$ 0,002	%	Aqua Regia Digestion
Lead	Lead (Pb)	[7439-92-1]	6,76 $\hat{\pm}$ 0,369	ppm	Aqua Regia Digestion
Palladium	Palladium (Pd)	[7440-05-3]	<10,0	ppb	Aqua Regia Digestion
Praseodymium	Praseodymium (Pr)	[7440-10-0]	3,65 $\hat{\pm}$ 0,256	ppm	Aqua Regia Digestion
Rubidium	Rubidium (Rb)	[7440-17-7]	8,58 $\hat{\pm}$ 1,23	ppm	Aqua Regia Digestion
Rhenium	Rhenium (Re)	[7440-15-5]	<0,001	ppm	Aqua Regia Digestion
Sulphur	Sulfur (S)	[7704-34-9]	0,012 $\hat{\pm}$ 0,003	%	Aqua Regia Digestion
Antimony	Antimony (Sb)	[7440-36-0]	0,42 $\hat{\pm}$ 0,05	ppm	Aqua Regia Digestion
Scandium	Scandium (Sc)	[7440-20-2]	2,3 $\hat{\pm}$ 0,34	ppm	Aqua Regia Digestion

Selenium	Selenium (Se)	[7782-49-2]	<1,00	ppm	Aqua Regia Digestion
Samarium	Samarium (Sm)	[7440-19-9]	3,05 $\hat{\pm}$ 0,244	ppm	Aqua Regia Digestion
Tin	Tin (Sn)	[7440-31-5]	1 $\hat{\pm}$ 0,091	ppm	Aqua Regia Digestion
Strontium	Strontium (Sr)	[7440-24-6]	39,7 $\hat{\pm}$ 3,47	ppm	Aqua Regia Digestion
Tantalum	Tantalum (Ta)	[7440-25-7]	<0,010	ppm	Aqua Regia Digestion
Terbium	Terbium (Tb)	[7440-27-9]	0,32 $\hat{\pm}$ 0,025	ppm	Aqua Regia Digestion
Tellurium	Tellurium (Te)	[13494-80-9]	<0,10	ppm	Aqua Regia Digestion
Thorium	Thorium (Th)	[7440-29-1]	5,75 $\hat{\pm}$ 0,296	ppm	Aqua Regia Digestion
Titanium	Titanium (Ti)	[7440-32-6]	0,102 $\hat{\pm}$ 0,024	%	Aqua Regia Digestion
Thallium	Thallium (Tl)	[7440-28-0]	0,067 $\hat{\pm}$ 0,01	ppm	Aqua Regia Digestion
Uranium	Uranium (U)	[7440-61-1]	0,58 $\hat{\pm}$ 0,021	ppm	Aqua Regia Digestion
Vanadium	Vanadium (V)	[7440-62-2]	19,5 $\hat{\pm}$ 2	ppm	Aqua Regia Digestion
Tungsten	Tungsten (W)	[7440-33-7]	0,36 $\hat{\pm}$ 0,05	ppm	Aqua Regia Digestion
Yttrium	Yttrium (Y)	[7440-65-5]	7,18 $\hat{\pm}$ 0,406	ppm	Aqua Regia Digestion
Ytterbium	Ytterbium (Yb)	[7440-64-4]	0,54 $\hat{\pm}$ 0,047	ppm	Aqua Regia Digestion
Zinc	Zinc (Zn)	[7440-66-6]	32,8 $\hat{\pm}$ 4,8	ppm	Aqua Regia Digestion
Zirconium	Zirconium (Zr)	[7440-67-7]	17,7 $\hat{\pm}$ 1,24	ppm	Aqua Regia Digestion