



## Redmond Clay<sup>®</sup> Elemental Analysis

Element	PPM	%	Element	PPM	%
Aluminum	58,140	5.814000%	Mercury	0.013	0.000001%
Antimony	0.114	0.000011%	Molybdenum	0.084	0.000008%
Arsenic	5.7	0.000566%	Neodymium	0.837	0.000084%
Barium	224	0.022440%	Nickel	4.18	0.000418%
Beryllium	0.28	0.000028%	Niobium	0.968	0.000097%
Bismuth	0.200	0.000020%	Osmium	0.005	0.000001%
Boron	14.3	0.001425%	Palladium	1.262	0.000126%
Bromine	5.22	0.000522%	Phosphorous	284	0.028400%
Cadmium	0.055	0.000006%	Platinum	0.013	0.000001%
Calcium	17,520	1.752000%	Potassium	5,344	0.534400%
Carbon	33,500	3.350000%	Praseodymium	4.6	0.000460%
Cerium	2.48	0.000248%	Rhodium	0.004	0.000000%
Cesium	0.306	0.000031%	Rubidium	25	0.002500%
Chloride	3,709	0.370900%	Ruthenium	0.077	0.000008%
Chromium	3.84	0.000384%	Samarium	6.11	0.000611%
Cobalt	0.92	0.000092%	Scandium	3.75	0.000375%
Copper	7	0.000748%	Selenium	0.28	0.000028%
Dysprosium	2.80	0.000280%	Silicon	221,400	22.140000%
Erbium	1.33	0.000133%	Silver	2.64	0.000264%
Europium	1.27	0.000127%	Sodium	17,260	1.726000%
Fluoride	18.6	0.001860%	Strontium	79.2	0.007920%
Gadolinium	5.1	0.000510%	Sulfur	588	0.058800%
Gallium	0.96	0.000096%	Tantalum	0.007	0.000001%
Germanium	0.79	0.000079%	Tellurium	0.013	0.000001%
Gold	16.41	0.001641%	Terbium	0.615	0.000062%
Hafnium	0.91	0.000091%	Thallium	0.19	0.000019%
Holmium	0.53	0.000053%	Thorium	0.92	0.000092%
Indium	0.28	0.000028%	Thulium	0.20	0.000020%
Iodine	66.4	0.006640%	Tin	0.24	0.000024%
Iridium	0.0006	0.000000%	Titanium	608	0.060800%
Iron	13,080	1.308000%	Tungsten	0.059	0.000006%
Lanthanum	10.8	0.001080%	Vanadium	61	0.006090%
Lead	11.90	0.001190%	Ytterbium	1.83	0.000183%
Lithium	27.8	0.002781%	Yttrium	14.7	0.001470%
Lutetium	0.235	0.000024%	Zinc	45	0.004460%
Magnesium	16,450	1.645000%	Zirconium	31.5	0.003150%
Manganese	208	0.020800%	Moisture (H <sub>2</sub> O)	Average	0.920000%

**PPM:** Parts Per Million.

**SOURCE:** Advanced laboratories, Inc. 40 West Louise Ave, Salt Lake City, UT 84115. Because Redmond Clay<sup>®</sup> is a naturally occurring product that has not been refined actual elemental results of any specific lot number will slightly vary.

**Notes:** The actual analysis conducted by Advanced laboratories, Inc. tested for the existence of 74 analytes. This certificate only lists analytes positively identified as being present in the sample because they occurred above the instrument's detection sensitivity. Oxygen, which occurs naturally in high levels in this type of clay, was not included in this test.

**Procedure:** The Redmond Clay<sup>®</sup> sample was diluted as necessary in glass Class A volumetric flasks. The elements Chloride, Fluoride, and Bromine were analyzed via Ion Chromatography (I.C.). Cold Vapor Atomic Absorption (CVAA) was used for analysis of Mercury. Semi-quantitative analyses for all other elements were carried out using inductively Coupled Plasma – Optical Emission Spectrometry (ICP-OES)