AZOMITE®
MINERAL PRODUCTS, INC.

Certificate of Analysis (LOT No: 2017.11)

Mineral Analysis

Item	Average %	Standard Deviation	Method Used	Calculated Element Content (%)	
Alumina, Al_2O_3	12.35	0.254	ME-ICP06	Aluminum	6.536
Barium oxide, BaO	0.138	0.014	ME-ICP06	Barium	0.124
Calcium oxide, CaO	3.103	0.508	ME-ICP06	Calcium	2.218
Carbon, C	0.392	0.115	C-IR07		
Iron oxide, Fe_2O_3	1.548	0.076	ME-ICP06	Iron	1.083
Magnesium oxide, MgO	0.971	0.156	ME-ICP06	Magnesium	0.586
Manganese oxide, MnO	0.068	0.005	ME-ICP06	Manganese	0.053
Phosphorus pentoxide, P_2O_5	0.043	0.008	ME-ICP06	Phosphorus	0.019
Potassium oxide, K_2O	5.222	0.360	ME-ICP06	Potassium	4.335
Silicon dioxide, SiO_2	66.772	1.569	ME-ICP06	Silicon	31.212
Sodium oxide, Na_2O	1.727	0.077	ME-ICP06	Sodium	1.281
Strontium oxide, SrO	0.024	0.005	ME-ICP06	Strontium	0.02
Titanium dioxide, TiO_2	0.215	0.009	ME-ICP06	Titanium	0.129
Loss on Incineration	7.982	0.911	OA-GRA05		

Additional Element Analysis

Item	Average (ppm)	Standard Deviation	Method Used	Item	Average (ppm)	Standard Deviation	Method Used
Antimony, Sb	0.073	0.007	ME-MS41	Mercury, Hg	0.010	0.000	ME-MS41
Arsenic, As	1.200	0.180	ME-MS41	Molybdenum, Mo	1.606	0.126	ME-MS61L
Barium, Ba	414.054	105.868	ME-MS41	Neodymium, Nd	34.076	2.883	ME-MS81
Beryllium, Be	0.547	0.087	ME-MS41	Nickel, Ni	1.327	0.166	ME-MS41
Bismuth, Bi	0.165	0.024	ME-MS41	Niobium, Nb	0.154	0.045	ME-MS41
Boron, B	<10	n/a	ME-MS41	Praseodymium, Pr	10.809	0.954	ME-MS81
Bromine, Br	0.173	0.141	ME-HAL01	Rhenium, Re	<0.001	n/a	ME-MS41
Cadmium, Cd	0.037	0.008	ME-MS41	Rubidium, Rb	32.241	3.751	ME-MS41
Cerium, Ce	40.611	3.442	ME-MS41	Samarium, Sm	5.145	0.465	ME-MS81
Cesium, Cs	1.535	0.374	ME-MS41	Scandium, Sc	1.486	0.211	ME-MS41
Chlorine, Cl	57.568	86.069	ME-HAL01	Selenium, Se	0.200	0.000	ME-MS41
Chromium, Cr	3.027	0.440	ME-MS41	Silver, Ag	0.012	0.008	ME-MS41
Cobalt, Co	1.462	0.114	ME-MS41	Strontium, Sr	69.135	15.544	ME-MS41
Copper, Cu	2.284	0.331	ME-MS41	Sulphur, S	0.015	0.006	S-IR08 S %
Dysprosium, Dy	2.890	0.243	ME-MS81	Tantalum, Ta	1.284	0.065	ME-MS81
Erbium, Er	1.687	0.130	ME-MS81	Tellurium, Te	0.010	0.000	ME-MS41
Europium, Eu	0.995	0.083	ME-MS81	Terbium, Tb	0.498	0.039	ME-MS81
Florine, F	37.059	11.350	ME-HAL01	Thallium, Tl	0.161	0.016	ME-MS41
Gadolinium, Gd	3.526	0.250	ME-MS81	Thorium, Th	8.608	1.041	ME-MS41
Gallium, Ga	3.992	0.705	ME-MS41	Thulium, Tm	0.265	0.018	ME-MS81
Germanium, Ge	0.087	0.011	ME-MS41	Tin, Sn	1.057	0.096	ME-MS41
Gold, Au	<0.02	n/a	ME-MS41	Titanium, Ti	0.051	0.005	ME-MS41
Hafnium, Hf	0.663	0.099	ME-MS41	Tungsten, W	0.190	0.038	ME-MS41
Holmium, Ho	0.579	0.048	ME-MS81	Uranium, U	0.649	0.070	ME-MS41
Indium, In	0.018	0.002	ME-MS41	Vanadium, V	13.162	1.344	ME-MS41
Lanthanum, La	60.965	6.347	ME-MS81	Ytterbium, Yb	1.832	0.111	ME-MS81
Lead, Pb	10.659	1.301	ME-MS41	Yttrium, Y	6.525	0.844	ME-MS41
Lithium, Li	21.184	2.765	ME-MS41	Zinc, Zn	14.081	1.382	ME-MS41
Lutetium, Lu	0.288	0.026	ME-MS81	Zirconium, Zr	26.351	3.919	ME-MS41

AZOMITE® Mineral Products, Inc. hereby certifies that this analysis is a typical analysis of AZOMITE®

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