Analytical Report

Rock Dust Local LLC
1445 Hemenway Rd.
Bridport, Vermont 05734
802-758-2220
www.RockDustLocal.com

Report ID: **AgReport- A14-04945**

Sample Name: **GAIA SCORIA**

Report Date: 14/8/2014

	Test Value	Unit Symbol	Detection Limit	Analysis Method
Arsenic (As)	< 5	ppm	5	FUS-MS-Na2O2
Boron (B)	20	ppm	10	FUS-MS-Na2O2
Barium (Ba)	625	ppm	3	FUS-MS-Na2O2
Beryllium (Be)	< 4	ppm	4	FUS-MS-Na2O2
Bismuth (Bi)	< 2	ppm	2	FUS-MS-Na2O2
Cadmium (Cd)	< 2	ppm	2	FUS-MS-Na2O2
Cerium (Ce)	49.4	ppm	0.8	FUS-MS-Na2O2
Cobalt (Co)	41.2	ppm	0.2	FUS-MS-Na2O2
Chromium (Cr)	100	ppm	30	FUS-MS-Na2O2
Cesium (Cs)	0.3	ppm	0.1	FUS-MS-Na2O2
Copper (Cu)	100	ppm	2	FUS-MS-Na2O2
Dysprosium (Dy)	4.0	ppm	0.3	FUS-MS-Na2O2
Erbium (Er)	2.6	ppm	0.1	FUS-MS-Na2O2
Europium (Eu)	1.6	ppm	0.1	FUS-MS-Na2O2
Gallium (Ga)	20.3	ppm	0.2	FUS-MS-Na2O2
Gadolinium (Gd)	5.4	ppm	0.1	FUS-MS-Na2O2
Germanium (Ge)	4.9	ppm	0.7	FUS-MS-Na2O2
Hafnium (Hf)	< 10	ppm	10	FUS-MS-Na2O2
Holmium (Ho)	0.9	ppm	0.2	FUS-MS-Na2O2
Indium (In)	< 0.2	ppm	0.2	FUS-MS-Na2O2
Lanthanum (La)	28.5	ppm	0.4	FUS-MS-Na2O2
Lithium (Li)	13	ppm	3	FUS-MS-Na2O2
Manganese (Mn)	1,450	ppm	3	FUS-MS-Na2O2
Molybdenum (Mo)	1	ppm	1	FUS-MS-Na2O2
Niobium (Nb)	14.3	ppm	2.4	FUS-MS-Na2O2
Neodymium (Nd)	25.3	ppm	0.4	FUS-MS-Na2O2
Nickel (Ni)	90	ppm	10	FUS-MS-Na2O2
Lead (Pb)	8.1	ppm	0.8	FUS-MS-Na2O2
Praseodymium (Pr)	6.5	ppm	0.1	FUS-MS-Na2O2
Rubidium (Rb)	19.7	ppm	0.4	FUS-MS-Na2O2
Antimony (Sb)	< 2	ppm	2	FUS-MS-Na2O2
Selenium (Se)	1.6	ppm	0.8	FUS-MS-Na2O2
Samarium (Sm)	5.1	ppm	0.1	FUS-MS-Na2O2
Tin (Sn)	2.1	ppm	0.5	FUS-MS-Na2O2
Strontium (Sr)	550	ppm	3	FUS-MS-Na2O2
Tantalum (Ta)	1.0	ppm	0.2	FUS-MS-Na2O2
Terbium (Tb)	0.8	ppm	0.1	FUS-MS-Na2O2
Tellurium (Te)	< 6	ppm	6	FUS-MS-Na2O2
Thorium (Th)	3.6	ppm	0.1	FUS-MS-Na2O2
Thallium (Tl)	0.2	ppm	0.1	FUS-MS-Na2O2
Thulium (Tm)	0.4	ppm	0.1	FUS-MS-Na2O2
Uranium (U)	1.1	ppm	0.1	FUS-MS-Na2O2
Vanadium (V)	199	ppm	5	FUS-MS-Na2O2
Tungsten (W)	< 0.7	ppm	0.7	FUS-MS-Na2O2
Yttrium (Y)	20.9	ppm	0.1	FUS-MS-Na2O2
Ytterbium (Yb)	2.1	ppm	0.1	FUS-MS-Na2O2
Zinc (Zn)	120	ppm	30	FUS-MS-Na2O2
Aluminium (Al)	8.18	%	0.01	FUS-Na2O2
Calcium (Ca)	5.71	%	0.01	FUS-Na2O2
Iron (Fe)	7.65	%	0.05	FUS-Na2O2
Potassium (K)	1.1	%	0.1	FUS-Na2O2
Magnesium (Mg)	3.68	%	0.01	FUS-Na2O2
Phosphorus (P)	0.168	%	0.005	FUS-Na2O2
Sulfur (S)	0.07	%	0.01	FUS-Na2O2
Silicon (Si)	24.10	%	0.01	FUS-Na2O2
Titanium	0.84	%	0.01	FUS-Na2O2

Analysis Methods

1) FUS-MS-Na2O2 (Fusion-Inductively Coupled Plasma-Mass Spectrometry-Sodium Peroxide Oxidation)
A sample is oxidized with sodium peroxide through sintering at 650°C. The oxidized material is dissolved in aqueous nitric acid. ICP-MS is used to quantify various elements in the resulting solution.

2) FUS-Na2O2 (Fusion-Inductively Coupled Plasma-Sodium Peroxide Oxidation)
A sample is oxidized with sodium peroxide through sintering at 650°C. The oxidized material is dissolved in aqueous nitric acid. ICP-OES is used to quantify various elements in the resulting solution.

Results Approved By:

Michael Wyrebek

Michael Wyrebek, MSc