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January 6, 2003  
 Project # 02-0987

**Analyst:** Kyle Schick, Laboratory Manager/Chemist

**Analysis Requested:** Total elemental composition of Brazilian Coral(Lithothamnium calcareum) Mgr. 0823

**Sample I.D.:** Brazilian Coral (Lithothamnium calcareum) Mgr. 0823 Lab # 85572

**Procedure:** The 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. Graphite Furnace Atomic Absorption (GFAA) was the method used to determine Arsenic, Selenium, Lead and Antimony. Semi-quantitative analysis for all other elements was carried out using Inductively Coupled Plasma - Optical Emission Spectrometry (ICP-OES).

ANALYTE	UNITS	L.CALCAREUM	ANALYTE	UNITS	L.CALCAREUM
Aluminum	ppm	1420	Mecury	ppm	0.011
Antimony	ppm	4.57	Molybdenum	ppm	<0.1
Arsenic	ppm	0.11	Neodymium	ppm	3.51
Barium	ppm	5.57	Nickel	ppm	0.074
Beryllium	ppm	0.081	Niobium	ppm	<0.1
Bismuth	ppm	2.19	Osmium	ppm	<0.05
Boron	ppm	12.1	Palladium	ppm	<0.05
Bromine	ppm	11.5	Phosphorus	ppm	169.
Cadmium	ppm	<0.03	Platinum	ppm	<0.05
Calcium	ppm	279,000	Potassium	ppm	427.
Carbon	ppm	124,000	Praseodymium	ppm	0.63
Cerium	ppm	2.11	Rhenium	ppm	<0.2
Cesium	ppm	2.66	Rhodium	ppm	<0.05
Chloride	ppm	2370.	Rubidium	ppm	27.6
Chromium	ppm	5.10	Ruthernium	ppm	0.055
Cobalt	ppm	0.107	Samarium	ppm	0.67
Copper	ppm	1.59	Scandium	ppm	0.685
Dysprosium	ppm	1.15	Selenium	ppm	0.060
Erbium	ppm	18.9	Silica	ppm	28,000
Europium	ppm	<0.1	Silver	ppm	1.78
Fluoride	ppm	7.55	Sodium	ppm	3970.
Gadolinium	ppm	3.04	Strontium	ppm	2190.
Gallium	ppm	1.27	Sulfur	ppm	940.
Germanium	ppm	3.08	Tantalum	ppm	<0.05
Gold	ppm	<0.05	Tellurium	ppm	0.066
Hafnium	ppm	<0.1	Terbium	ppm	<0.2
Holmium	ppm	<0.1	Thallium	ppm	0.33
Indium	ppm	0.17	Thorium	ppm	0.081
Iodine	ppm	10.6	Thulium	ppm	<0.05
Iridium	ppm	<0.05	Tin	ppm	0.197
Iron	ppm	10,100.	Titanium	ppm	31.1
Lanthanum	ppm	0.314	Tungsten	ppm	<0.05
Lead	ppm	0.061	Vandaium	ppm	12.9
Lithium	ppm	3.90	Ytterbium	ppm	0.237
Lutetium	ppm	0.310	Yttrium	ppm	1.74
Magnesium	ppm	99,800	Zinc	ppm	16.2
Manganese	ppm	90.5	Zirconium	ppm	0.642
Bacteria	counts/100 g	6			

< = no quantities of this analyte detected above the stated limit.