BioSuperfood - Nutrient Analysis

Analysis obtained during December through January 2006/7

	Method/Unit	BioSuperfood F1	BioSuperfood F2	BioSuperfood F3
Brunswick Laboratory				
ORAC analysis				
ORAC hydro*	(μmoleTE/g)	44	48	56
ORAC lipo ^	(μmoleTE/g)	13	15	19
ORAC total	(μmoleTE/g)	57	63	75

*The ORAC analysis provides a measure of the scavenging capacity of antioxidants against the peroxyl radical, which is one of the most common reactive oxygen species (ROS) found in the body. $ORAC_{hydro}$ reflects water-soluble antioxidant capacity and the ^ $ORAC_{lipo}$ is the lipid soluble antioxidant capacity. Trolox, a water-soluble Vitamin E analog, is used as the calibration standard and the ORAC result is expressed as micromole Trolox equivalent (TE) per gram.

HORAC*	(μmole CAE/g)	2.16	1.85	3.99
NORAC^	(μmole TE/g)	5.64	6.67	9.31
SOD*	(kunitSODeq/g)	0.4	0.43	1.63

*Caffeic Acid is used as the calibration standard and the HORAC result is expressed as μmole Caffeic Acid equivalent(CAE) per gram. ^ Trolox is used as the calibration standard and the NORAC result is expressed as μmole Trolox equivalent (TE) per gram.

*Superoxide Dismutase (SOD) is used as the calibration standard and the SOD result is expressed as kilo unit SOD equivalent (kunitSODeq) per gram.

Carotenoids				
α-carotene	μg/g	~22.45*	~26.35*	~30.10*
β-carotene	μg/g	449	527	602
Lycopene	μg/g	0.32	0.35	0.45
Lutein	μg/g	13.5	16.4	14.3
Astaxanthin	μg/g	13.8	14.6	19.8
Xeaxanthin	μg/g	176	122	176

*Detection Limit: (0.5 μg/g)

Vitamins				
α tocopherol	μg/g	3.86	2.84	3.73
β tocopherol	μg/g	0.41	0.37	0.49
γ tocopherol	μg/g	5.54	5.19	9.35
δ tocophrerol	μg/g	3.48	3.41	5.54
Vitamin A	μg/g	<0.5	<0.7	<0.9
Vitamin B_1	μg/g	<1.0	<1.2	<1.9
Vitamin B_2	μg/g	0.13	0.16	0.19
Vitamin B_3	μg/g	3.84	4.05	5.32
Vitamin B_6	μg/g	<0.1	<0.1	<0.1
Vitamin B_{12}	μg/g	<0.05	<0.09	<0.13
Vitamin C	μg/g	12.9	40.5	83.5
Vitamin D_3	μg/g	<1.0	<1.0	<1.0
Vitamin H	μg/g	<0.1	<0.1	<0.1
Vitamin K_1	μg/g	<0.5	<0.5	<0.5
Folic acid	μg/g	<0.5	<0.5	<0.5

*BQL: Below Quantitation Limit (Vitamin A; 0.5 μg/g, Vitamin B1; 1 μg/g, Vitamin B6; 0.1 μg/g, Vitamin B12; 0.05 μg/g, Vitamin H; 0.1 μg/g, Vitamin K_1; 0.5 μg/g , Folic acid; 0.5 μg/g).

Northern Analytical Laboratory

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Minerals and Trace Elements *^			
Lithium	0.005	0.005	0.005
Beryllium	0.001	0.001	0.001
Boron	0.058	0.12	0.1
Sodium	20	20	20
Magnesium	43	43	40
Pluminium	2	2.1	3
Silicon	5	7.5	8.75
Phosphorus	13	13	14
Potassium	20	20	20
Calcium	39.9	42	53.6
Scandium	0.1	0.1	0.1
Titanium	0.1	0.35	0.14
Vanadium	0.016	0.045	0.028
Chromium	0.05	0.064	0.05
Manganese	2.5	2.5	3.25
Iron	17.6	17.5	23.2
Cobalt	0.025	0.018	0.015
Nickel	0.049	0.054	0.041
Copper	0.12	0.12	0.14
Zinc	0.9	0.89	1.2
Gallium	0.0012	0.0012	0.0012
Germanium	0.001	0.001	0.001
Arsenic	0.001	0.0029	0.001
Selenium	0.005	0.005	0.005
Rubidium	0.079	0.078	0.065
Strontium	0.11	0.12	0.12
Yttrium	0.0031	0.0047	0.0027
Zirconium	0.12	0.2	0.21
Niobium	0.014	0.0081	0.011
Molybdenum	0.01	0.01	0.001
Ruthenium	0.001	0.001	0.001
Rhodium	0.001	0.001	0.001
Palladium	0.005	0.005	0.005
Silver	0.005	0.005	0.005
Cadmium	0.0018	0.00024	0.00018
Tin	0.0049	0.012	0.0032
Antimony	0.001	0.001	0.001
Tellurium	0.005	0.005	0.005
Caesium	0.0005	0.0005	0.0005
Barium	0.054	0.059	0.074
Lanthanum	0.001	0.001	0.001
Cerium	0.0014	0.0012	0.0016
Praseodymium	0.001	0.001	0.001
Neodymium	0.001	0.001	0.001
Samarium	0.001	0.001	0.001
Europium	0.001	0.001	0.001
Gadolinium	0.001	0.001	0.001
Terbium	0.001	0.001	0.001
Dysprosium	0.001	0.001	0.001
Holmium	0.001	0.001	0.001
Erbium	0.001	0.001	0.001

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Thulium		0.001	0.001	0.001
Ytterbium		0.001	0.001	0.001
Lutetium		0.001	0.001	0.001
Hafnium		0.0069	0.015	0.0085
Tantalum		0.01	0.01	0.01
Tungsten		0.01	0.01	0.01
Rhenium		0.001	0.0039	0.0018
Osmium		0.001	0.001	0.001
Iodine**		~0.350	0.350**	~0.350
Iridium		0.001	0.001	0.001
Platinum		0.001	0.001	0.001
Gold		0.0039	0.015	0.0025
Mercury		0.005	0.005	0.005
Thallium		0.001	0.001	0.001
Lead		0.0028	0.0072	0.0032
Bismuth		0.005	0.005	0.005
Thorium		0.001	0.0059	0.001
Uranium		0.001	0.001	0.001

* Per ~10 grams (converted from ppmw to mg)

** Individual analysis

~ Approximated

^ Detection Limit: (0.5 ppmw)

Laboratoire d'analyses S.M. inc.

Azote	%	9.25	9.06	9.20
Heterotrophic bacteria	UFC/g	n/a	n/a	n/a
Cholesterol	mg/100g	2.20	1.70	2.00
Energy/100g	Cal/Kj	364/1523	364/1524	366/1530
E-coli	UFC/g	none	none	none
Dietary Fiber	%	9.3	9.80	9.30
Glucides	%	22.0	23.1	22.0
Monounsaturated fats	g/100g	0.71	0.62	0.81
Polyunsaturated fats	g/100g	1.92	2.14	2.08
Polyunsaturated fats/omega 3	g/100g	0.09	0.11	0.14
Polyunsaturated fats/omega 6	g/100g	1.81	2.00	1.92
Saturated fat	g/100g	2.10	2.04	2.13
Fat	g/100g	4.97	5.05	5.29
Trans Fat	g/100g	0.02	0.03	0.04
Humidity	%	5.69	5.76	5.52
Yeast	UFC/g	n/a	n/a	n/a
Mold	UFC/g	n/a	n/a	n/a
Pesticides	USP 29	Conform	Conform	Conform
Protein	%	57.8	56.6	67.5
Pseudomonas acruginosa	n/a	none	none	none
Residues	tbd	tbd	tbd	tbd
Salmonella	n/a	none	none	none
Staphylococcus	n/a	none	none	none
Sugars	%	0.9	1.1	1.4