

Typical Chemical Analysis of Spirulina

(Analysis done by TNO, a government-sponsored, UN-approved laboratory.)

Chemical Composition		Moisture	7.0%	Sterols	325 mg/kg
Moisture	7.0%	Ash	9.0%	Cholesterol	196 mg/kg
Ash	9.0%	Minerals		Sitosterol	97 mg/kg
Proteins	71.0%	Calcium (Ca)	1,315 mg/kg	Dihidro 7 Cholesterol	} 32 mg/kg
Crude fiber	0.9%	Phosphorus (P)	8,942 mg/kg	Sodium (Na)	
Xanthophylls	1.80 g/kg of product	Iron (Fe)	580 mg/kg	Chloride (Cl)	
Carotene	1.90 g/kg of product	Sodium (Na)	412 mg/kg	Magnesium (Mg)	
Chlorophyll a	7.60 g/kg of product	Chloride (Cl)	4,400 mg/kg	Carotenoids 4,000 mg/kg	
Total Organic Nitrogen	13.35%	Magnesium (Mg)	1,915 mg/kg	α Carotene	average traces
Nitrogen from Proteins	11.36%	Manganese (Mn)	25 mg/kg	β Carotene	average 1,700 mg/kg
Crude Protein (%N x 6.25)	71.00%	Zinc (Zn)	39 mg/kg	Xanthophylls	average 1,000 mg/kg
Essential Amino Acids		Potassium (K)	15,400 mg/kg	Cryptoxanthin	average 556 mg/kg
Histidine	1.08%	Others	57,000 mg/kg	Echinenone	average 439 mg/kg
Isoleucine	4.13%	Nutritional Value		Zeaxanthin	average 316 mg/kg
Leucine	5.80%	Protein Efficiency Ratio (PER) of 2.2-2.6		Lutein & Euglenanone	average 289 mg/kg
Lysine	4.00%	(74-87% that of casein)		Total Lipids 7.0%	
Methionine	2.17%	Net Protein Utilization (NPU) of 53-61%		Fatty Acids 5.7%	
Phenylalanine	3.95%	(85-92% that of casein)		Lauric (C-12)	229 mg/kg
Threonine	4.17%	Digestibility of 83-84%		Myristic (C-14)	644 mg/kg
Tryptophan	1.13%	Available Lysine - average - 85%		Palmitic (C-16)	21,141 mg/kg
Valine	6.00%			Palmitoleic (C-16)	2,035 mg/kg
Non-Essential Amino Acids		Nitrogen from Nucleic Acids 1.99%		Palmitolinoleic (C-16)	2,565 mg/kg
Alanine	5.82%	Ribonucleic Acid (RNA)	3.50%	Heptadecanoic (C-17)	142 mg/kg
Arginine	5.98%	RNA = N x 2.18		Stearic (C-18)	353 mg/kg
Aspartic Acid	6.43%	Deoxyribonucleic acid (DNA)	1.00%	Oleic (C-18)	3,009 mg/kg
Cystine	0.67%	DNA = N x 2.63		δ Linoleic (C-18)	13,784 mg/kg
Glutamic Acid	8.94%	Total Carbohydrates 16.5%		α Linolenic (C-18)	11,970 mg/kg
Glycine	3.46%	Rhamnose	average 9.0%	Linolenic (C-18)	427 mg/kg
Proline	2.97%	Glucane	average 1.5%	Others	699 mg/kg
Serine	4.00%	Phosphoryled cyclitols	average 2.5%	Insaponifiable 1.3%	
Tyrosine	4.60%	Glucosamine & Muramic acid	average 2.0%	Sterols	325 mg/kg
Vitamins		Glycogen	average 0.5%	Triterpen alcohols	800 mg/kg
Biotin (H)	average 0.40 mg/kg	Sialic acid & others	average 0.5%	Carotenoids	4,000 mg/kg
Cyanocobalamin (B-12)	average 2.00 mg/kg			Chlorophyll a	7,600 mg/kg
d-Ca-Pantothenate	average 11.00 mg/kg			Others	150 mg/kg
Folic Acid	average 0.50 mg/kg				
Inositol	average 350.00 mg/kg				
Nicotinic Acid (PP)	average 118.00 mg/kg				
Pyridoxine (B-6)	average 3.00 mg/kg				
Riboflavine (B-2)	average 40.00 mg/kg				
Thiamine (B-1)	average 55.00 mg/kg				
Tocopherol (E)	average 190.00 mg/kg				