



NUTRITIONAL DIVISION

Our Core products, many which we hold in stock, are carefully selected through our Approval Scheme. They include: Vitamins • minerals • fish oil concentrates • key herbal extracts • antioxidants • greens • superfood blends made to order and some worldwide used Trademarked items which are backed by science and more.

GEE LAWSON PRODUCT MASTER FILE

SPECIFICATION

ITEM	SPECIFICATION
Product name	SPIRULINA POWDER - ORGANIC (GB-ORG-04)
Product code	SAP 40050991 LUV 26000169-25
Botanical Name	<i>Arthrospira platensis</i>
Appearance	Fine dark green powder
Identification (FTIR)	Complies to standard
Protein	≥ 60%
Chlorophyll	11-14 mg/g (semi annually)
Carotenoids	4.0 – 5.5 mg/g (semi annually)
Moisture	≤ 8.0%
Particle size	100% pass on 80 mesh
Ash	≤ 8.0%
Crude phycocyanin	12 – 19% (semi annually)
Aerobic plate count	≤ 100,000 cfu/g
<i>E.Coli</i>	Negative/10g
<i>Salmonella</i>	Negative/10g
<i>Staphylococcus aureus</i>	Negative/10g
Yeast & Mold	≤ 300 cfu/g
Coliforms	≤ 10 cfu/g
Polycyclic Aromatic Hydrocarbons (PAH) Sum of Benz(a)anthracene, Chrysene Benzo(a)pyrene, Benzo(b)fluoranthene	< 60 ppb
Arsenic	≤ 1 ppm (quarterly test)
Cadmium	≤ 1 ppm
Lead	≤ 1 ppm
Mercury	< 0.1 ppm
Storage	Store in a cool dry and dark place at room temperature or < 20°C
Shelf life	2 years



ISO 9001:2008

HELPLINE +44 (0) 20 8343 5400

HEAD OFFICE (London, UK) for UK, Benelux, Scandinavian and general enquiries.
GEE LAWSON EUROPEAN OFFICES (located in Switzerland, Italy and Lithuania)
for Central, Southern and Eastern Europe enquiries.

info@geelawson.com • www.geelawson.com



more than an ingredient company



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OTHER DATA

ITEM	Data
Origin	Algae
CAS Number	Not applicable
Botanical name	<i>Arthrospira platensis</i>
Part(s) of plant used	Whole plant
Extraction solvent	Not an extract
Extraction ratio	Not applicable
Particle size	See above microscopic specification
Bulk density	0.45 – 0.55 g/ml
Solubility in water	Not soluble
Country of Origin	China
Storage conditions	Store in a cool dry and dark place at room temperature or < 20°C

Ingredients	Approx. Content (%)
Spirulina powder	100%

ALLERGENS

Ingredient	Yes	No	Quantity/Additional Information
Celery / Other umbelliferae or products thereof		✓	
Cereals containing Gluten (wheat, rye, barley, oats, spelt, kamut or their hydrolysed strains) or products thereof		✓	
Crustaceans/shellfish or products thereof		✓	
Eggs or products thereof		✓	
Fish or products thereof		✓	
Milk or Milk products (including lactose)		✓	
Mustard or products thereof		✓	
Nuts or products thereof		✓	
Peanuts or products thereof		✓	



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Sesame seeds or products thereof	√	
SO ₂ or Sulphite at concentrations over 10mg/kg or 10mg/L express as SO ₂	√	
Soyabeans or products thereof	√	
Molluscs or products thereof	√	
Lupins or products thereof	√	

REGULATORY STATUS

ITEM	INFORMATION
Extraction Solvents	Complies with Directive 2009/32/EC
Pesticides	Pesticide free
Mycotoxins	Not applicable
PAH's	Complies with regulation EC/1881/2006/ and amendments thereof, where applicable
Dioxins, Furans, Dioxins like PCB's and Non dioxin like PCBs	Not applicable
Heavy Metals	Complies with regulation EC/1881/2006/ and amendments thereof, where applicable
Arsenic	≤ 1.0 ppm
BSE/TSE	Free from BSE/TSE
GMO Status	Does not have to be labelled as a GMO according to regulations EC/1829/2003 and EC/1830/2003
Irradiation Status	Non Irradiated
Melamine	Complies with regulation EC/1881/2006/ and amendments thereof, where applicable
Ethylene Oxide	Absent
Vegetarian Status	Suitable for Vegetarians
Vegan Status	Suitable for Vegans
Kosher certified	Yes
Halal certified	No
Applications	Suitable for use in food supplements

NUTRITIONAL INFORMATION

Nutrient	Units/100 g	Value
Energy	Kcal	383
	Kj	1609
Protein	g	65
Carbohydrate	g	17
Of which - Sugars	g	<0.1



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Polyols	g	-
Starch	g	-
Fiber	g	6
Fat	g	6
Of which – Saturates	g	3
Mono-unsaturates	g	0.5
Polyunsaturates	g	2.5
Sodium	g	2.37

Signed

Julian Domszy

Dr Julian Domszy
Technical Manager

Date: 21/12/16
Version 2

The information contained in this document is based upon information provided by the manufacturer of the product and upon our own knowledge and from testing where relevant. Every effort has been made to ensure that the information is true and accurate but no guarantees are given or implied.

APPENDIX

Manufacturing flow diagram
Typical Certificate of Analysis
Material Safety Data Sheet



ISO 9001:2008

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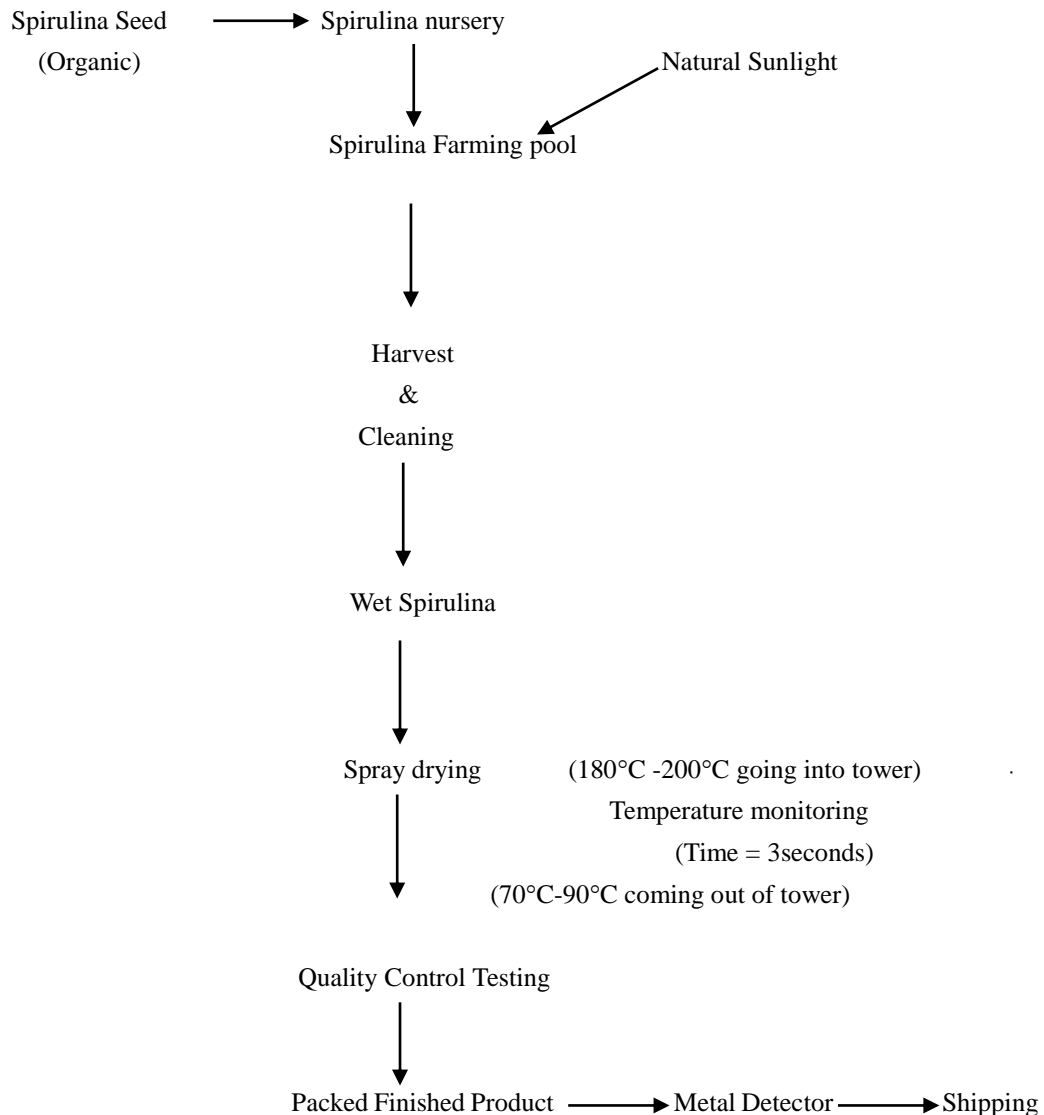


300 Corporate Drive Suite 14
Blauvelt, New York 10913

Phone 845-358-8600
Fax 845-358-9003

Product Producing Process Chart

Product Name: Spirulina Powder- Organic
Product Code: RFI-EU131009



This information is presented in good faith. This information is offered solely for your investigation, verification, and consideration

Date and Initials of Preparer: SA 10/28/14

New document frm go1301v3; 10/28/2014;SA



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Certificate of Analysis

Product Name: Spirulina Powder- Organic
Botanical Name: *Arthrospira platensis*
Product Code: RFI-EU131009
Plant part: Whole Plant
Carrier: None
Country of Origin: China
Manufacture Date: 05/2014

Lot Number: A14128NL01

Exp. Date: 05/2016

Characteristic	Test Method	Specification	
Appearance	Visual	Fine Dark Green Powder	Complies
Identification	FTIR/ Scientific Method	Complies to Standard	Complies
Protein	AOAC 968.06/945.18	≥ 60%	65.1%
Chlorophyll	UV Spectrophotometry	11-14 mg/g, test semi-annually	Complies
Carotenoids	AOAC 924.04/Paper chromatography	4.0-5.5 mg/g, test semi-annually	Complies
Moisture	TQ-104	≤ 8.0%	4.91%
Particle Size	TQ-106 (AOAC 973.03)	100% pass on 80 mesh	100% pass
Ash	AOAC 930.03	≤ 8.0%	6.7%
Crude Phycocyanin	UV Spectrophotometry	12-19%. Test semi-annually	Complies
Microbiology			
Aerobic Plate Count	AOAC RI validation #121204	≤ 100,000 cfu/g	4,100 cfu/g
<i>E. coli</i>	AOAC 2009.02	Negative/10g	Negative
<i>Salmonella</i>	AOAC 2001.09 or USP <2022>	Negative/10g	Negative
<i>Staphylococcus aureus</i>	USP <2022>	Negative/10g	Negative
Yeast & Mold	AOAC RI Performance Tested SM Method - Certificate N° 041001	≤ 300 cfu/g	< 100 cfu/g
Coliforms	AOAC 966.24	≤ 10 cfu/g	< 3 cfu/g
Polycyclic Aromatic Hydrocarbons (PAH)			
Sum of Benz(a)anthracene, Chrysene, Benzo(a)pyrene, Benzo(b)fluoranthene	GS-MS	< 60 ppb	9.29 ppb
Heavy metals			
Arsenic (Inorganic)	ICP/MS USP<730>	≤1.0 ppm, test quarterly	0.335 ppm
Cadmium	ICP/MS USP<730>	≤1.0 ppm	0.043 ppm
Lead	ICP/MS USP<730>	≤1.0 ppm	0.210 ppm
Mercury	ICP/MS USP<730>	≤0.1 ppm	0.004 ppm



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**This is a natural product and there may be color variations from lot to lot due to crop fluctuations from harvest to harvest.*

Regulatory/Labeling:
Organic Spirulina Powder

Storage: Store in a cool, dark, and dry area.

Shelf life: 24 months from production in original closed package at room temperature or $< 20^{\circ}\text{C}$.

Quality Control:  **Date:** 09/30/14

Quality Assurance:  **Date:** 9/30/14

The information contained herein is believed to be accurate and offered in good faith for the benefit of the buyer. However, RFI does not assume responsibility for determination of suitability, labeling or claims, patent infringements, liabilities or risks associated with the use of this product.



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Preparer Signature: _____

Date: 11/09/10

Technical Director Signature: _____

Date: 11/09/10

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New Document: 05/30/04,

Rev.01: new format, 07/22/08;

Rev.02: cGMP addition, 06/22/09.

Rev.03: Moisture spec revised previously 7%, typo error, 08/18/09 Revised spec: Chlorophyll prev >10, Carotenoides prev >3.5, C-Phycocyanin prev >10, update methods, 09/16/09

Rev 04: revise Pb <=1ppm 11/09/10

Material Safety Data Sheet

Prepared by: RFI Ingredients
300 Corporate Drive Suite 14
Blauvelt, NY 10913
For Information: (845) 358 - 8600

I. MATERIAL IDENTIFICATION AND INFORMATION:

Product Identification:

Spirulina Powder - Organic

Synonym:

N/A

CAS:

N/A

DOT Classification:

Non-hazardous

COMPONENTS: CHEMICAL AND COMMON NAMES	% (W/W)	OSHA PEL	TLV
Spirulina Powder – Organic	100%	N/A	N/A

II. PHYSICAL AND CHEMICAL CHARACTERISTICS:

APPEARANCE & ODOR	SPECIFIC GRAVITY (@20/20°C)	SOLUBILITY IN WATER	MELTING POINT	BOILING POINT	VAPOR PRESSURE	EVAPORATION RATE	VAPOR DENSITY (AIR =1)
Fine green Powder	N/A	Dispersible	Not Known	N/A	N/A	N/A	N/A

III. FIRE AND EXPLOSION HAZARD DATA:

FLASH POINT	EXPLOSION HAZARDS	SPECIAL FIRE FIGHTING PROCEDURES	INCOMPATIBILITY (MATERIALS TO AVOID)	HAZARDOUS COMBUSTION PRODUCTS	EXTINGUISH MEDIA	HAZARDOUS POLYMERIZATION
N/A	None Known	Use standard procedures and preferred extinguishing media above.	Oxidizing materials can cause a reaction	Burning generates CO, CO ₂ , irritating smoke	Water Fog CO ₂ Foam Dry Chemical	Will not occur

IV. SPILL & LEAK PROCEDURES:

IF RELEASED OR SPILLED	WASTE DISPOSAL METHOD
Soak up spills with absorbent media; collect in containers for disposal. Avoid open flame or other sources of ignition.	Treat, store, and dispose in accordance with Federal, State, and Local regulations. Material is biodegradable and maybe treated via sanitary waste treatment plant or approved sanitary landfill.



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V. HEALTH HAZARD DATA:

PRIMARY ROUTES OF ENTRY	CARCINOGEN LISTED IN	HEALTH HAZARDS	MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE
Absorption Ingestion; inhalation	Not Listed.	This mixture has not been tested as a whole. The mixture includes, however, ingredients at concentrations greater than or equal 1% which, undiluted, could present the following hazards to health: SKIN/EYES: May irritate skin & eyes INGESTION: No adverse effects anticipated INHALATION: No adverse effects anticipated	Not known for normal conditions of use.

EMERGENCY FIRST AID PROCEDURES- SEEK MEDICAL ASSISTANCE FOR FURTHER TREATMENT, OBSERVATIONS, AND SUPPORT IF NECESSARY:

EYE CONTACT	SKIN CONTACT	INHALATION	INGESTION
Immediately flush with large amounts of water for at least 15 minutes.	N/A	Not Known	Not Known

VI. CONTROL AND PROTECTIVE MEASURES:

RESPIRATORY PROTECTION	HANDLING AND STORAGE PRECAUTIONS	OTHER PROTECTIVE CLOTHING AND EQUIPMENT	HYGIENIC WORK PRACTICES	ENGINEERING CONTROLS
Dust mask.	Keep containers closed.	Protective gloves.	Wear standard work gloves, standard process and lab ware and hats	Provide adequate ventilation. Eyewash and safety showers should be easily accessible.

VII. SECTION 313 SUPPLIER NOTIFICATION:

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right To Know Act of 1986 and of 40 CFR 372.

Chemical	CAS#	% by Weight
	N/A	

The information contained herein is provided in good faith and is believed to be correct as of the date hereof. However, RFI Ingredients makes no representation as to the comprehensiveness or accuracy of the information. It is expected that individuals receiving the information will exercise their independent judgment in determining its appropriateness for a particular purpose. Accordingly, RFI Ingredients will not be responsible for damages of any kind resulting from the use or reliance upon such information.

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Date of Issue: 05/30/04

Date of Last Revision: N/A