

G S ORGANIC SOLUTIONS INC.

REPORT OF ANALYSIS

For: (39367) G S ORGANIC SOLUTIONS INC.
Organic Solutions

Analysis	Level Found		Reporting			Analyst- Date	Verified- Date
	As Received	Units	Limit	Method			
Sample ID: Pure Spirulina	Lab Number: 8734685	Date Sampled: 2020-03-09					
Aspartic acid	5.90	%	0.01	AOAC 994.12 (Alt. III)		akj2-2020/04/03	amw7-2020/04/03
Threonine	2.09	%	0.01	AOAC 994.12 (Alt. III)		akj2-2020/04/03	amw7-2020/04/03
Serine	2.99	%	0.01	AOAC 994.12 (Alt. III)		akj2-2020/04/03	amw7-2020/04/03
Glutamic acid	8.36	%	0.01	AOAC 994.12 (Alt. III)		akj2-2020/04/03	amw7-2020/04/03
Proline	2.27	%	0.01	AOAC 994.12 (Alt. III)		akj2-2020/04/03	amw7-2020/04/03
Glycine	2.98	%	0.01	AOAC 994.12 (Alt. III)		akj2-2020/04/03	amw7-2020/04/03
Alanine	4.56	%	0.01	AOAC 994.12 (Alt. III)		akj2-2020/04/03	amw7-2020/04/03
Cystine	0.52	%	0.01	AOAC 994.12 (Alt. I)		tds5-2020/03/19	amw7-2020/03/19
Valine	3.94	%	0.01	AOAC 994.12 (Alt. III)		akj2-2020/04/03	amw7-2020/04/03
Methionine	1.37	%	0.01	AOAC 994.12 (Alt. I)		tds5-2020/03/19	amw7-2020/03/19
Isoleucine	3.52	%	0.01	AOAC 994.12 (Alt. III)		akj2-2020/04/03	amw7-2020/04/03
Leucine	5.69	%	0.01	AOAC 994.12 (Alt. III)		akj2-2020/04/03	amw7-2020/04/03
Tyrosine	2.67	%	0.01	AOAC 994.12 (Alt. III)		akj2-2020/04/03	amw7-2020/04/03
Phenylalanine	2.86	%	0.01	AOAC 994.12 (Alt. III)		akj2-2020/04/03	amw7-2020/04/03
Lysine (total)	2.96	%	0.01	AOAC 994.12 (Alt. III)		akj2-2020/04/03	amw7-2020/04/03
Histidine	0.97	%	0.01	AOAC 994.12 (Alt. III)		akj2-2020/04/03	amw7-2020/04/03
Arginine	4.68	%	0.01	AOAC 994.12 (Alt. III)		akj2-2020/04/03	amw7-2020/04/03
Tryptophan	0.59	%	0.01	AOAC 988.15 (mod)		akj2-2020/03/19	amw7-2020/03/19
Lactose	n.d.	% sugar	0.8	AOAC 982.14C (mod)		amw7-2020/03/17	akj2-2020/03/17

The result(s) issued on this report only reflect the analysis of the sample(s) submitted.

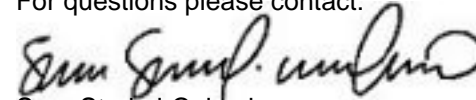
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G S ORGANIC SOLUTIONS INC.**REPORT OF ANALYSIS**For: (39367) G S ORGANIC SOLUTIONS INC.
Organic Solutions

Analysis	Level Found	Units	Reporting		Analyst- Date	Verified- Date
	As Received		Limit	Method		
Sample ID: Pure Spirulina	Lab Number: 8734685 (con't)					
Fructose	n.d.	% sugar	0.8	AOAC 982.14C (mod)	amw7-2020/03/17	akj2-2020/03/17
Glucose	n.d.	% sugar	0.8	AOAC 982.14C (mod)	amw7-2020/03/17	akj2-2020/03/17
Maltose	n.d.	% sugar	0.8	AOAC 982.14C (mod)	amw7-2020/03/17	akj2-2020/03/17
Sucrose	n.d.	% sugar	0.8	AOAC 982.14C (mod)	amw7-2020/03/17	akj2-2020/03/17
Protein	56.0	%	0.1	MWL FO 014	lkd8-2020/03/16	bch0-2020/03/16

All results are reported on an AS RECEIVED basis., n.d. = not detected

For questions please contact:


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Detailed Method Description(s)**AOAC 994.12 (Alt. III) total amino acids-hydrolysis**

A small amount of a homogenous sample is digested using a combination of heat and hydrochloric acid to break down the peptide bonds between the amino acids. The extract is treated to clean it up and then an aliquot is injected into the LC/MS/MS. This method cannot determine tryptophan. The amino acids cystine and methionine must undergo special treatment before they can be analyzed by this procedure.

Sugar Profile

Analysis follows MWL HPLC 009 which is based on AOAC 982.14C (modified). Samples are extracted with hot water and acetonitrile. Extracts are analyzed by HPLC (high pressure liquid chromatography) using a refractive index (RI) detector. The standard reporting level is 0.75 % for each mono- and disaccharide.

AOAC 994.12 (Alt. I) - cystine & methionine

Sample analysis follows MWL HPLC 019 which is based on AOAC 994.12 (Alt I). A small amount of a homogenous sample initiall treated with performic acid to prevent oxidation of cystine and methionine and then this extract is digested using a combination of heat and hydrochloric acid to break down the peptide bonds between the amino acids. The extract is treated to clean it up and then an aliquot is injected into the HPLC using a post-column derivatization apparatus and ninhydrin as the chromophore.

AOAC 988.15 - tryptophan

Sample analysis follows MWL HPLC 025 which is based on AOAC 988.15. A small amount of a homogenous sample is hydrolyzed using a base (sodium hydroxide) and nitrogen blanketed extraction and heat. After the hydrolysis, the extract is cleaned-up and injected into the liquid chromatogram (LC) using a mass selective detector (LC/MS).

AOAC 992.15 protein

Protein analysis is carried out using MWL FO 014 which is based on AOAC 992.15 and USDA/FSIS CLG-PRO04.03. Samples are weighed and placed in an instrument that combusts the sample and releases nitrogen. The amount of nitrogen is determined and then multiplied by a factor to convert the nitrogen value to a protein value. The standard reporting level is 0.1%

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