

**Request for Scientific Evaluation of Substantial
Equivalence Application for the Approval of Chia
seeds (*Salvia Hispanica* L.) from The Chia
Company for use in bread**

by
THE CHIA COMPANY



Application submitted by
FOOD LAW CONSULTANTS



December 22, 2009

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1. SUMMARY

This notification dossier is submitted by FOOD LAW CONSULTANTS, S.P.R.L. on behalf of THE CHIA COMPANY pursuant to Article 5 of Regulation (EC) n° 258/97 on novel foods and novel food ingredients (hereinafter, the “**Novel Food Regulation**”)¹. It seeks to obtain a scientific evaluation of substantial equivalence for the approval of Chia seeds (*Salvia Hispanica* L.) from THE CHIA COMPANY for use in bread at 5%.

THE CHIA COMPANY is an Australian company owned by three directors who have combined hundred and fifty years agronomic experience in producing food for human consumption including wheat, pumpkins, watermelons and chickpeas.

The use of Chia seeds as a novel food ingredient has been approved by Commission Decision 2009/827/EC of October 13, 2009 granted to COLOMBUS PARADIGM INSTITUTE S.A. (hereinafter, the “**Approved Chia**”)².

Substantial equivalence is sought between the Chia seed of THE CHIA COMPANY (hereinafter, the “**TCC seed**”) and the Chia seed manufactured by COLOMBUS PARADIGM INSTITUTE S.A.

The manufacturing process of the TCC seed is similar to that of the Approved Chia. The TCC seed’s level of undesirable substances is also similar, and considered safe for human consumption. It is intended to be consumed in a manner identical to the Approved Chia.

In addition, the EUROPEAN FOOD SAFETY AUTHORITY (hereinafter, the “**EFSA**”) stated that the compositional data which had been provided on Australian Chia seeds in the framework of the safety assessment of the Approved Chia showed little variety to Chia seeds from the South American countries from which the Approved Chia originates (EFSA, 2009).

This notification dossier follows the “*ACNFP guidelines for the presentation of data to demonstrate substantial equivalence between a novel food or food ingredient and an existing counterpart*” and provides evidence to confirm that the TCC seed is substantially equivalent to the Approved Chia.

¹ Regulation 258/97/EC of the European Parliament and of the Council of 27 January 1997 concerning novel foods and novel food ingredients (OJ L 43, of 14.2.1997, p. 1).

² 2009/827/EC: Commission Decision of 13 October 2009 authorising the placing on the market of Chia seed (*Salvia hispanica*) as novel food ingredient under Regulation (EC) No 258/97 of the European Parliament and of the Council (notified under document C(2009) 7645) (OJ L 294, 11.11.2009, p. 14–15).

2. ADMINISTRATIVE INFORMATION

2.1. Applicant

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2.3. Name of Novel Food Ingredient

The Chia seed of THE CHIA COMPANY

2.4. Date of Application

December 22, 2009

3. COMPOSITION

3.1. Information on the source organism

Chia (*Salvia hispanica* L.) is a summer annual herbaceous plant belonging to the Labiatae family. It grows approximately 1-1.2 meters tall. It grows from a seeding to develop lush, green foliage before it produces long flowers similar to lavender which are either purple or, less commonly, white. These flowers develop into seed pods to produce Chia seeds.

Chia seeds were first used as food as early as 3500 BC and were one of the main dietary components of the Aztecs and the Mayans. They were eaten as a grain, drunk as a beverage when mixed with water, ground into flour, included in medicines, pressed for oil and used as a base for face and body paints.

In the 1990s, a research initiative was launched between a North American non profit organisation and a group of South American farmers with the goal of increasing and diversifying commercial production in the region. Chia was selected as part of the cropping program and growing trials proved successful. In the years that followed small scale, commercial production of Chia began.

Today, Chia is grown commercially in several Latin American countries and in Australia.

In Australia, Chia has been recognized as non-traditional, non-novel food by the Novel Food Reference Group of the FOOD STANDARDS AUSTRALIA NEW ZEALAND (hereinafter, the “FSANZ”).

3.2. Production process

The Chia seed from THE CHIA COMPANY is not processed in any way prior to the use as a food ingredient.

Chia is planted with precision planters into a prepared soil bed to ensure accurate seeding depth and optimal plant density.

It is then fertilised with superphosphate, potassium and nitrogen along with additional trace elements as required maximising crop vigour to produce ideal levels of biomass. Plant tissue tests are taken during the growth stage to ensure the correct nutrition levels are obtained to guarantee the oil yield, Omega 3:6 ratio and levels of protein, fibre, antioxidants, vitamins and minerals.

During crop growth the biomass of the crop is measured with satellite technology imagery to indicate areas of higher or lower biomass levels to allow management to apply corrective nutrition applications. The Chia crop is watered with a gravity fed irrigation system which provides perfect soil moisture levels to guarantee the optimal yield and nutritional profile. Soil moisture data logger probes are positioned in the crop to ensure the soil moisture level is accurately monitored.

Once the Chia seed has developed in the seed head it is mechanically swathed to ensure even ripening and consistent oil yield in the seed and to prevent seed loss through shedding onto the ground.

At harvest, each paddock is harvested and recorded individually and the seed from each paddock, farmer and variety has its identity preserved throughout the cleaning, packing and storage process to ensure complete supply chain traceability.

After harvest, a sample from each lot is collected and tested for a full array of nutritional and residue tests. The seeds are directly sent to the receival point for collation before freighting, temporarily stored on the farm prior to forwarding to the receival point, or transferred to a separate facility for processing in case of breeding stock.

After receival and collation, the seeds are loaded onto road transport and brought to a seed cleaning facility. There, they are transferred to silos for fumigation, cleaned, packed off as finished products and dispatched.

They are fumigated with carbon dioxide (CO₂), a substance which has been authorized as a fumigant as per Council Directive 91/414/EEC of 15 July 1991 concerning the placing of plant protection products on the market³.

As finished products, the seeds may be sent directly to warehouses for storage, directly to customers, or directly for further processing. They may also go to warehouses prior to being sent to customers or to undergo further processing.

A diagram describing in detail this production method is included in Appendix 1.

3.3. Composition of the final product

The relative ratios of micronutrients found in the TCC seed and in the Approved Chia are substantially equivalent, as it can be shown in the following comparative tables.

Table 1. Composition of the TCC seed and the Approved Chia

NUTRIENT		TCC SEED		APPROVED CHIA ⁴
		Result %	Samples date	Result %
Dry matter*		95 - 96.8	18/02/2009 06/03/2009 18/05/2009	91 - 96
Protein*		17.4 - 22.4	18/02/2009 06/03/2009 18/05/2009	20 - 22
Fat*		28.5 - 34.7	18/02/2009 06/03/2009 18/05/2009	30 - 35
Carbohydrate*		37.1 - 42.6	18/02/2009 06/03/2009 18/05/2009	25 - 41
Fiber	Soluble**	5.3 - 7.1	08/2007	-
	Insoluble**	30.9 - 33.0	08/2007	18 - 30
Ash*		4.5 - 5.6	18/02/2009 06/03/2009 18/05/2009	4 - 6

* Certificates of analysis are hereby provided as Appendix 2

** Certificates of analysis are hereby provided as Appendix 4

³ OJ L 230, 19.8.1991, p. 1–32.

⁴ As per Commission Decision 2009/827/EC of October 13, 2009

Table 2. Mineral content of the TCC seed and the Approved Chia*

MINERAL	TCC SEED		APPROVED CHIA
	Result (mg/100g)	Samples date	Result (mg/100g)
Sodium	<0.1 – 6	18/02/2009 06/03/2009 18/05/2009	0,94 - 12,15
Potassium	510 - 710	18/02/2009 06/03/2009 18/05/2009	660 - 809,15
Calcium	500 – 640	18/02/2009 06/03/2009 18/05/2009	557 - 770
Iron	5.7 – 15	18/02/2009 06/03/2009 18/05/2009	6.3 – 9.9
Magnesium	310 - 430	18/02/2009 06/03/2009 18/05/2009	325 - 390
Phosphorus	600 – 870	18/02/2009 06/03/2009 18/05/2009	751 - 780

* Certificates of analysis are hereby provided as Appendix 2

Table 3. Vitamins in the TCC seed and the Approved Chia

VITAMIN	TCC SEED		APPROVED CHIA
	Result % (mg/100g)*	Samples date	Result (mg/100g)*
Retinol ** (Vit. A)	16 IU	16/07/2007	44 IU
Thiamin ** (Vit. B1)	0.79 - 0,81	16/07/2007	0.7 – 0.18
Riboflavin ** (Vit. B2)	0.05	16/07/2007	0.04 – 0.2
Niacin ** (Vit. B3)	7.8 – 9.4	16/07/2007	6.13 -7.2
Cobalamin ** (Vit B12)	90 – 110 ng	16/07/2007	Unknown
Ascorbic acid *** (Vitamin C)	<1 – 6	18/02/2009 06/03/2009 18/05/2009	<3 – 5.4
Alpha-tocopherol *** (Vit. E)	<0.1 – 0.3	18/02/2009 06/03/2009 18/05/2009	0.74

* Except for vitamin A and vitamin B12

** Certificates of analysis are hereby provided as Appendix 3

**** Certificates of analysis are hereby provided as Appendix 2

Table 4. Aminoacids in the TCC seed and the Approved Chia*

AMINOACIDS	TCC SEED		APPROVED CHIA
	Result % of protein	Samples date	Result % of protein
Isoleucine	3.05 – 3.53	08/2007	3.21 - 3.98
Leucine	5.47 – 6.34	08/2007	5.89 - 7.30
Lysine	3.87 – 4.42	08/2007	3.60 - 5.50
Methionine	1.00 – 1.14	08/2007	0.36 - 0.45
Phenylalanine	4.19 – 4.71	08/2007	4.73 - 5.86
Threonine	2.90 – 3.42	08/2007	3.23 - 4.25
Tryptophan	0.89 – 1.04	08/2007	Unknown
Valine	3.86 – 4.56	08/2007	5.10 - 6.32

* Certificates of analysis are hereby provided as Appendix 4

Table 5. Fatty acid profile in the TCC seed and the Approved Chia

FATTY ACID	TCC SEED		APPROVED CHIA
	Result %	Samples date	Result (range)
Total fat*	28.5 - 34.7	18/02/2009 06/03/2009 18/05/2009	30 – 35
Saturated fat*	2.8 - 4.1	18/02/2009 06/03/2009 18/05/2009	Unknown
Mono-unsaturated Fats*	2 – 3 (g/100g)	18/02/2009 06/03/2009 18/05/2009	Unknown
Poly-unsaturated Fats*	17.8 – 27.8 (g/100g)	18/02/2009 06/03/2009 18/05/2009	Unknown
Trans fats*	<0.1 - 0,1 (g/100g)	18/02/2009 06/03/2009 18/05/2009	Unknown
C06:0 Caproic**	< 0.1	02/03/2009	< 0.01
C08:0 Caprylic**	< 0.1	02/03/2009	< 0.01
C12:0 Lauric**	< 0.1	02/03/2009	< 0.01
C14:0 Myristic**	< 0.1	02/03/2009	< 0.1 – 0.10
C15:0 Pentadecanoic**	< 0.1	02/03/2009	< 0.01
C16:0 Palmitic**	7.1	02/03/2009	6.64 – 6.73
C18:0 Stearic**	3.7	02/03/2009	2.93 – 3.24
C20:0 Arachidic**	0.3	02/03/2009	< 0.01 – 0.3
C14:1 Miristoleic**	< 0.1	02/03/2009	< 0.01
C16:1 Palmitoleic**	0.3	02/03/2009	0.1 – 0.15
C17:1 Heptadecanoic**	< 0.1	02/03/2009	< 0.01 – 0.1
C18:1w9 Oleic**	8.7	02/03/2009	6.61 – 7.51
C20:1w9 Eicosaenoic**	< 0.1	02/03/2009	< 0.01 – 0.1

FATTY ACID	TCC SEED		APPROVED CHIA
	Result %	Samples date	Result (range)
C18:2w6 Linoleic**	22.0	02/03/2009	18.64 – 19.6
C18:3w3 Linolenic**	57.4	02/03/2009	18.7 – 73.8
C18:3w6 Linolenic**	< 0.1	02/03/2009	< 0.1 – 0.1
C20:2w6 Eicosadienoic**	< 0.1	02/03/2009	< 0.01 – 0.1
C20:3w3 Eicosatrienoic**	< 0.1	02/03/2009	0.1
C20:5w3 Eicosapentaenoic**	< 0.1	02/03/2009	< 0.01
C22:4 Docosatetraenoic**	< 0.1	02/03/2009	0.1
C22:5w3 Docosapentaenoic**	< 0.1	02/03/2009	< 0.01 - < 0.1
C22:6w3 Docosahexaenoic**	< 0.1	02/03/2009	< 0.01
C24 Lignoceric**	0.1	02/03/2009	< 0.1 – 0.2

* Certificates of analysis are hereby provided as Appendix 2

** Certificates of analysis are hereby provided as Appendix 3

4. NUTRITIONAL VALUE

As shown in Table 1 above, the TCC seed contains about 20 % protein, a level greater than other nutritional grains such as wheat (14 %), corn (14 %), rice (8 %), oats (15 %), barley (9 %), and amaranth (14 %). Chia seeds have an oil content of approximately one third of its weight, about 80 % of which is α -linolenic acid, making this ingredient a source of n-3 fatty acids.

The seeds alone possess about 5 % soluble fiber.

The TCC seeds are also a source of vitamins B, calcium, phosphorous, potassium, zinc, and copper, and contain natural antioxidants (chlorogenic acid, caffeic acid and flavanol glycosides).

4.1. General description of Chia seeds

Chia (*Salvia Hispanica* L.) is an estival growing annual species belonging to the family Labiata that is indigenous to Central and South America, particularly the Rocky Mountains area extending from the Mexican western central area towards northern Guatemala.

Pre-Columbian civilizations, mainly Aztecs, used chia as a raw material for a number of applications, such as in a variety of medicinal and nutritional compounds, and in substances such as paints. Chia was extremely important to Pre-Columbian societies. From the point of view of significance, only corn and beans outweighed it.

Although Chia was originally part of the South and Central American and U.S. Southwest indigenous diet, this changed with colonization and modernization. Today, Mexican Indian descendants still grow Chia on a small scale using rudimentary technological methods, for preparing a popular beverage called “Chia fresca”.

4.2. History of use

Salvia hispanica L. is commonly consumed in several countries, including the USA, Canada and Australia, all of which have now a “history of safe use”. This “history of safe use” is based on the absence of records of adverse effects, including allergenicity, anti-nutritional or toxic effects for Chia seeds and ground whole Chia intake in the listed countries.

In addition, the detailed data on products including Chia is summarised as follows⁵:

⁵ Cf. European Food Safety Authority (EFSA)’s Safety of ‘Chia seed (*Salvia hispanica*) and ground whole Chia seed’ (The EFSA Journal (2009) 996, 15-26).

Table 6. Worldwide overview: Examples of products including Chia seeds or oil

COMPANY NAME	WEBSITE	MONTHLY CONSUMPTION	HISTORY	APPLICATIONS
1. USA AND CANADA				
Nutraceuticals Holding LLC	www.omega3Chia.com www.researchedproducts.com	1 MT*/month	Since 2007	Nutritional Supplement Industry: Chia seeds and Chia oil soft gel caps
Valensa International LLC	www.valensa.com	10 MT/month	Since 2002	Nutritional Supplement Industry: Chia seeds Food Industry: Chia oil (Tresalbio™)
Greensplus	www.greensplus.com	17 MT/month	Since 2007	Nutritional Supplement Industry: Chia seeds Food. Industry: Chia Bars
Nature's Path	www.naturespath.com	1 MT/month	Since 2007	Food Industry: Chia Bars: Dr. Weil™ Chia Razz™ Pure Fruit and Nut Bar INGREDIENTS: including organic Chia seeds
Ruth's Hempfood	http://www.ruthshempfoods.com/Chia.html	1.5 MT/month	Since 2006	Food Industry: Cereal Breakfast
Salba	http://www.sourcealba.com/products.php	300 MT/year	Since 2002	Food Industry: cookies, cereal bars, chips, and seeds (all white Chia seed)
2. MEXICO				
Fuente natura, Mexico	www.fuente natura.cl	500 kg/ month	Since 2006	Nutritional Supplement Industry: Chia seeds and Chia oil
3. CHILE				
FPT SA. Chile	www.benexia.com	2 MT/month for its final product (Chia seeds growers. 850 MT this year for Food Industry)	Since 2005	Nutritional Supplement Industry: Chia seeds and Chia oil soft gel caps
Empresas Carozzi SA. Chile	www.carozzi.cl	3 MT/month	Since December 2007	Pastas (Chia oil) Cereals Breakfast (Chia seeds)
Others.Chile	www.Chiachile.cl www.supernatural.cl	500 Kg/month	Since 2006	Nutritional Supplement Industry: Chia seeds

4. AUSTRALIA AND NEW ZEALAND				
The Chia Company, AU	www.theChiaco.com.au	MT/month for its final product (Chia Growers.1000 MT this year, for Food Industry) 80 000 units of Chia in 150 g packs have been sold in the past 18 months	Since 2000	Nutritional Supplement Industry: Chia seeds Food Industry in General
Dovedale Bread.NZ	http://www.dovedalebread.co.nz/index.html	2MT/month	Since 2005	Bakery Industry: Bread with Chia
Slim Secrets	http://www.slimsecrets.com.au/cookie_trail_mix.asp	20 kg/month	Since 2009	Cookie snack with Chia
Fonterra	http://www.fonterra.com	500 kg/month	Since 2009	Yoghurt (dairy)
Centenary Bakery	http://www.madebybikini.com/	2 MT/month	Since August 2009	Bread
5. ASIA				
Latina Inc. Japon	http://www.latina-inc.com	2MT/month	Since 2005	Nutritional Supplement
K-Squares, Korea	http://www.ksquares.com	500 kg/month	Since 2006	Nutritional Supplement
6. EUROPEAN UNION				
Naturkost Übelhör GmbH & Co KG.DE	http://www.saChia.de/home.html http://www.shop.saChia.de	Not available	Since 2005	Nutritional Supplement Industry

* MT (metric ton = 1000 kng)

5. METABOLISM

5.1. Bioavailability

The following studies have investigated the bioavailability of Chia seeds:

AYERZA R and COATES W (2005). Ground Chia seed and Chia oil effects on plasma lipids and fatty acids in rats. Nutrition Research. 25:995-1003.

This study was performed to assess the effect of Chia seed on plasma total cholesterol, high-density lipoprotein (HDL), low-density lipoprotein, triacylglycerol content, and fatty acid profile when fed to rats. Twenty-four male Wistar rats were fed ad libitum 3 diets containing equal energy levels derived from corn oil (T1), Chia seed (T2), or Chia oil (T3) for four weeks. At the end of the feeding period, 6 rats from each treatment were used for blood analyses. Blood samples were analyzed for total cholesterol, HDL, low-density lipoprotein,

triacylglycerol content, and fatty acid composition. Rats fed Chia showed a significant decrease in serum triacylglycerol content, 3 and 2.5 times lower than the control for T2 and T3, respectively. There was a significant increase in serum HDL cholesterol content, 21.8% and 51% for T2 and T3, respectively, with the increase between chia diets being significant ($P < 0.05$). Total cholesterol was significantly lower for the T2 diet compared with the T3 diet. Serum fatty acid composition showed a significantly higher α -linolenic acid content and an improved ratio of T-6/T-3 fatty acids for T2 and T3 compared with T1. In sum, the chia diets dramatically decreased triacylglycerol levels and increased HDL cholesterol and T-3 fatty acid contents in rat serum.

AYERZA R and COATES W (2000). Dietary levels of Chia: influence on yolk cholesterol, lipid content and fatty acid composition for two strains of hens. Poult. Sci. 79: 724-739.

Four hundred fifty H&N laying hens, half white and half brown, were fed for 90 days to compare a control diet to diets containing 7, 14, 21, and 28% Chia (*Salvia hispanica L.*) seed. Cholesterol content, total fat content, and fatty acid composition of the yolks were determined 30, 43, 58, 72, and 90 days from the start of the trial. Significantly less cholesterol was found in egg yolks produced by the hens fed the diets with 14, 21, and 28% chia compared to control, except at day 90. Palmitic fatty acid content and total saturated fatty acid content decreased as chia percentage increased and as the trial progressed. Total omega-3 fatty acid content was significantly greater ($P < 0.05$) than from the control diet. Generally, total PUFA content tended to be highest in the yolks of the white hens.

AYERZA R and COATES W (2002). Dietary levels of Chia: influence on hen weight, egg production and sensory quality, for two strains of hens. Br. Poult. Sci. 43: 283-290.

Four hundred fifty H&N laying hens, half white and half brown, were fed for 90 days to compare a control diet with diets containing 70, 140, 210 and 280 g/kg chia (*Salvia hispanica L.*) seed. Although hen weight was not significantly affected by diet, manure production was less for the hens fed on Chia. Egg weight and production, yolk weight, and yolk percentage were determined at day 0, 30, 43, 58, 72 and 90. A sensory evaluation was conducted on eggs produced during the last week of the trial. No significant differences in egg production were found among treatments for the brown hens. With the 280 g/kg Chia diet, the white hens produced fewer and lighter eggs than did the hens fed on the control diet. No significant differences were detected in yolk weight until day 90. On this date, the yolks produced by the white hens fed on the 70 g/kg Chia diet were significantly lighter in weight, whereas the brown hens produced significantly heavier yolks, compared with the hens fed on the control diet. Yolk weight as a percentage of egg weight was lower for white hens throughout the trial except on day 58 with the 140 g/kg Chia diet. Significant differences, however, were detected only with the 70 g/kg Chia diet on day 90 and with the 210 g/kg Chia die on day 58, 72 and 90. No significant differences in taste preference or flavour were found among any of the Chia treatments and the control.

R. AYERZA and W COATES (2006). Influence of Chia on total fat, cholesterol, and fatty acid profile of Holstein cow's milk. Revista Científica de la Universidad de Ciencias Empresariales y Sociales, Volumen X - No. 2 - Primavera 2006:40-49.

This feeding trial was conducted with multiparous lactating Holstein cows to determine the effect that feeding Chia (*Salvia hispanica L.*) would have on milk. Total fat, cholesterol, and fatty acid profile were compared between two groups of cows fed a chia supplement, and a control supplement, over a period of 94 days. Milk production was not significantly different ($P < 0.05$) between the two groups of cows. Cholesterol and total fat contents were lower in the milk obtained from the cows fed the Chia diet. However, no significant differences were

detected. Oleic, linoleic and linolenic fatty acids were significantly higher with the Chia diet than with the control diet, as was total polyunsaturated fatty acid. No significant differences in saturated fatty acids were detected between treatments. Significantly ($P < 0,05$) lower SFA:PUFA and SFA:n-3 ratios in the milk were found as compared to those of the control diet.

5.2. Stability of the product

The Chia seed is a small round seed with an outer shell that perfectly encapsulates the Omega 3 content. Other oil seeds have a tip on the end which throughout the cleaning and packing process the tip can break off and cause oxidation and rancidity. Chia does not have this tip, so each round seed stays intact and stable.

As part of their hygiene system, THE CHIA COMPANY keeps samples from each crop batch.

In March 2009, THE CHIA COMPANY conducted a routine re-test of the 2006 crop. This three year comparison demonstrates that the nutritional content of the seed has not changed over a three year period. There has been no deterioration in taste or smell and the microbial status remained constant.

The comparative results for the 2006 crop of July 2007 and March 2009 can be found in Appendix 3.

6. INTENDED USE

The TCC seed is intended to be used in bread products at a maximum of 5%. This use has been approved by the European Commission pursuant to Decision 2009/827/EC.

The safety of TCC has also been established for other food uses such as dairy products, snacks and pasta, although the present application is limited to its use in bread.

7. LEVEL OF UNDESIRABLE SUBSTANCES

7.1. Introduction

The applicant's production process ensures that the levels of undesirable substances are well below the specified limits and equivalent to the Approved Chia.

7.2. Heavy metals and Chemical contaminants

The level of heavy metals is below the specified limits.

Table 7. Analytical data on heavy metals in the TCC seed and the Approved Chia*

HEAVY METAL	TCC SEED		APPROVED CHIA
	Result (ppm)	Samples date	Result (ppm)
Arsenic	<0.1 (Detection limit: 0.1)	26/02/09 13/03/09 22/05/09 08/06/09	< 0.1 - < 0.2
Cadmium	<0.1 (Detection limit: 0.1)		0.018 - < 0.2
Mercury	<0.01 - <0.02 (Detection limit: 0.02)		< 0.01 - < 0.03
Lead	<0.5 - <1 (Detection limit: 1)		< 0.004 - < 0.12

* Certificates of analysis are hereby provided as Appendix 5

7.3. Microbiology

The Chia seeds of THE CHIA COMPANY have been tested for pathogenic microorganisms and total viable counts at PROMICRO PTY LTD and at AGRIFOOD TECHNOLOGY, both of which are accredited by the Australian Association of Testing Authorities (NATA), and at the AUSTRALIAN GOVERNMENT NATIONAL MEASUREMENT INSTITUTE.

There were no pathogenic organisms detected and the total viable counts were found low.

Table 8. Analytical data on mycotoxins in the TCC seed and the Approved Chia*

MYCOTOXINS	TCC SEED		APPROVED CHIA
	Result (ppb)	Samples date	Result (ppb)
Ochratoxin A	<1	2/10/2009	Not detected (Detection limit: 5)
Aflatoxin B1	<1	2/10/2009	Not detected (Detection limit: 2)
Aflatoxin B2	<1	2/10/2009	Not detected (Detection limit: 4)
Aflatoxin G1	<1	2/10/2009	Not detected (Detection limit: 2)
Aflatoxin G2	<1	2/10/2009	Not detected (Detection limit: 4)
Sum of afl. B1 + B2+ G1+ G2	<5	27/10/2008 10/06/2009	Not detected (Detection limit: 2)
Toxin T-2	<100	2/10/2009	Not detected (Detection limit: 50)
Toxin HT-2	<100	2/10/2009	Not detected (Detection limit: 300)
Fumonisin B1	<250	2/10/2009	Not detected (Detection limit: 100)
Fumonisin B2	<250	2/10/2009	Not detected (Detection limit: 100)
Deoxynivalenol	<250	2/10/2009	Not detected (Detection limit: 200)
Zearalenone	<25	2/10/2009	Not detected (Detection limit: 75)

* Certificates of analysis are hereby provided as Appendix 6

Table 9. Analytical data on microbiological contaminants in the TCC seed and the Approved Chia

MYCOTOXINS	TCC SEED		APPROVED CHIA
	Result	Samples date	Result
Yeasts/g *	<200 CFU/g	4/06/2009	<10 - 1100
Accredited moulds/g *	<200 CFU/g	4/06/2009	<10 - 1100
Coagulase Positive Staphylococci / g ***	<100 CFU/g – 200 CFU/g	19/10/2006 21/08/2007	<100 **
Bacillus cereus/g ***	<100 CFU/g – 200 CFU/g	04/03/2009 05/03/2009	<100
Salmonella/25 g ***	Not Detected/25 g	17/02/2009 03/04/2009	Absent
E. Coli (CFU) ***	<10 CFU/g – 20 CFU/g	20/04/2009 05/05/2009	Unknown
Listeria monocytogenes ***	Not Detected/25 g	12/05/2009 28/05/2009	Unknown
Clostridium perfringens ***	<100 CFU/g – <200 CFU/g	14/05/2009	Unknown

* Certificates of analysis are hereby provided as Appendix 7

** Staph. Aureus/g

*** Certificates of analysis are hereby provided as Appendix 8

8. OTHER RELEVANT DATA

8.1. Toxicity and Safety studies

The safety of Chia seeds when used in bread at a maximum of 5% has been confirmed by the EFSA in its opinion adopted on March 13, 2009 (EFSA, 2009).

EFSA's opinion took into consideration a number of trials to assess the nutritional quality of Chia as a feed ingredient, its effects on selected markers of coagulation and immune function in humans, and its potential allergenicity.

The safety of Chia seeds has been further investigated by FERNANDEZ I, VIDUEIROS SM, AYERZA R, COATES W and PALLARO A (FERNANDEZ I and al., 2008). This study was performed to analyse the effect of Chia on some aspects of the immune system such as the thymus and serum IgE concentration. Weanling male Wistar rats (23 d of age) from the Department of Nutrition at the School of Pharmacy and Biochemistry of the University of Buenos Aires, were divided in three groups (6 rats each) that received for one month (g/kg diet): 150 ground Chia seed (T1); 50 Chia oil (T2); no Chia (T3; control group). Diets T1 and T2 were formulated to provide equal quantities of alpha-linolenic acid from the chia. All the experimental diets were iso-energetic, contained (g/kg) 200 protein and 70 oil, and were prepared according to the American Institute of Nutrition guidelines. No significant differences were observed in food intake, body weight, thymus weight, total thymocyte number and IgE levels when Chia was added to experimental diets as seeds (T1) or as oil (T2) when compared with the control (T3). Moreover, no symptoms such as dermatitis, diarrhoea and abnormal animal growth and behaviour were observed. Adding Chia seeds or oil to experimental diets did not produce any of the problems associated with other n-3 fatty acid sources such as flaxseed or marine products, e.g. fishy flavour, weight loss, digestive problems, diarrhoea and allergies.

No safety concerns were identified by the Novel Food Reference Group of the FSANZ.

8.2. Quality and Hygiene system

The applicant has put in place a Quality Management System based on the Codex Hazard Analysis Critical Control Point (HACCP) method developed by the *Codex Alimentarius*. This system describes agreed methods and specifications to maintain effective control, thereby ensuring a high standard of food safety throughout the production process.

The Quality Management System of THE CHIA COMPANY has been designed to meet the requirements of the SFQ (Safe Quality Food) 2000 Code, a HACCP-based international standard focusing on risk assessment and prevention of food recalls and food safety incidents.

A certificate of compliance with the HACCP system is attached in Appendix 9.

9. CONCLUSION

From the above nutritional, safety, bioavailability and toxicological information and considering the history of use presented in Section 4.2 *supra*, it can be concluded that (i) the TCC seed is substantially equivalent to the Approved Chia in the sense of Article 5 of Regulation 258/97 and; (ii) no adverse effects would be expected for consumers who regularly ingest up to 5% of Chia seeds in bread, in the short or long term.

10. APPENDIX

Appendix 1: Flow chart on cultivation, harvesting and storage

Appendix 2: Composition

Appendix 3: Comparative test results for the 2006 crop initially tested in July 2007 and re- tested in March 2009

Appendix 4: Certificate of Aminoacids

Appendix 5: Analytical data on heavy metals

Appendix 6: Analytical data on mycotoxins

Appendix 7: Analytical data on microbiological contaminants

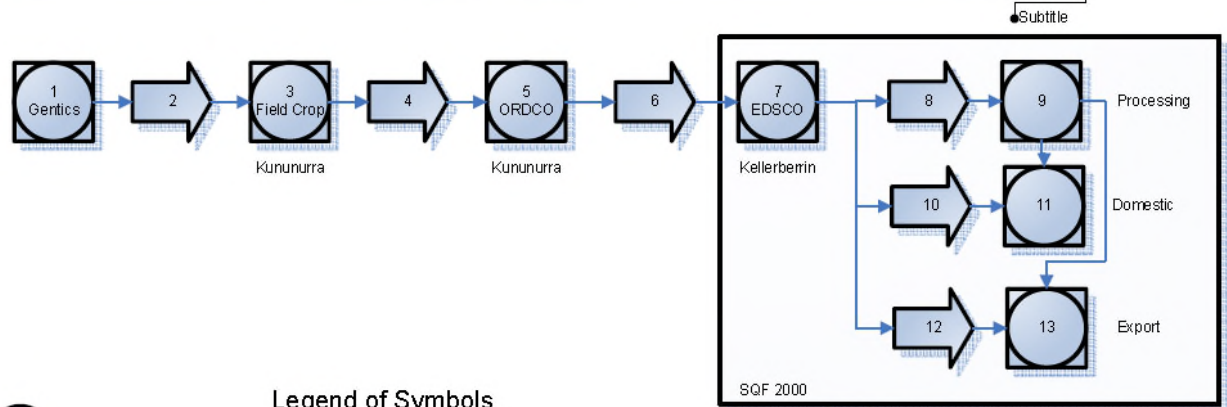
APPENDIX 8: Analytical data on microbiological contaminants (Second part)

Appendix 9: Certificate of compliance with HACCP system

**Appendix 1: Flow chart on cultivation, harvesting and storage of the Chia of THE
CHIA COMPANY**

9/30/2009

Chia Company Stage Flow Diagrams Overview



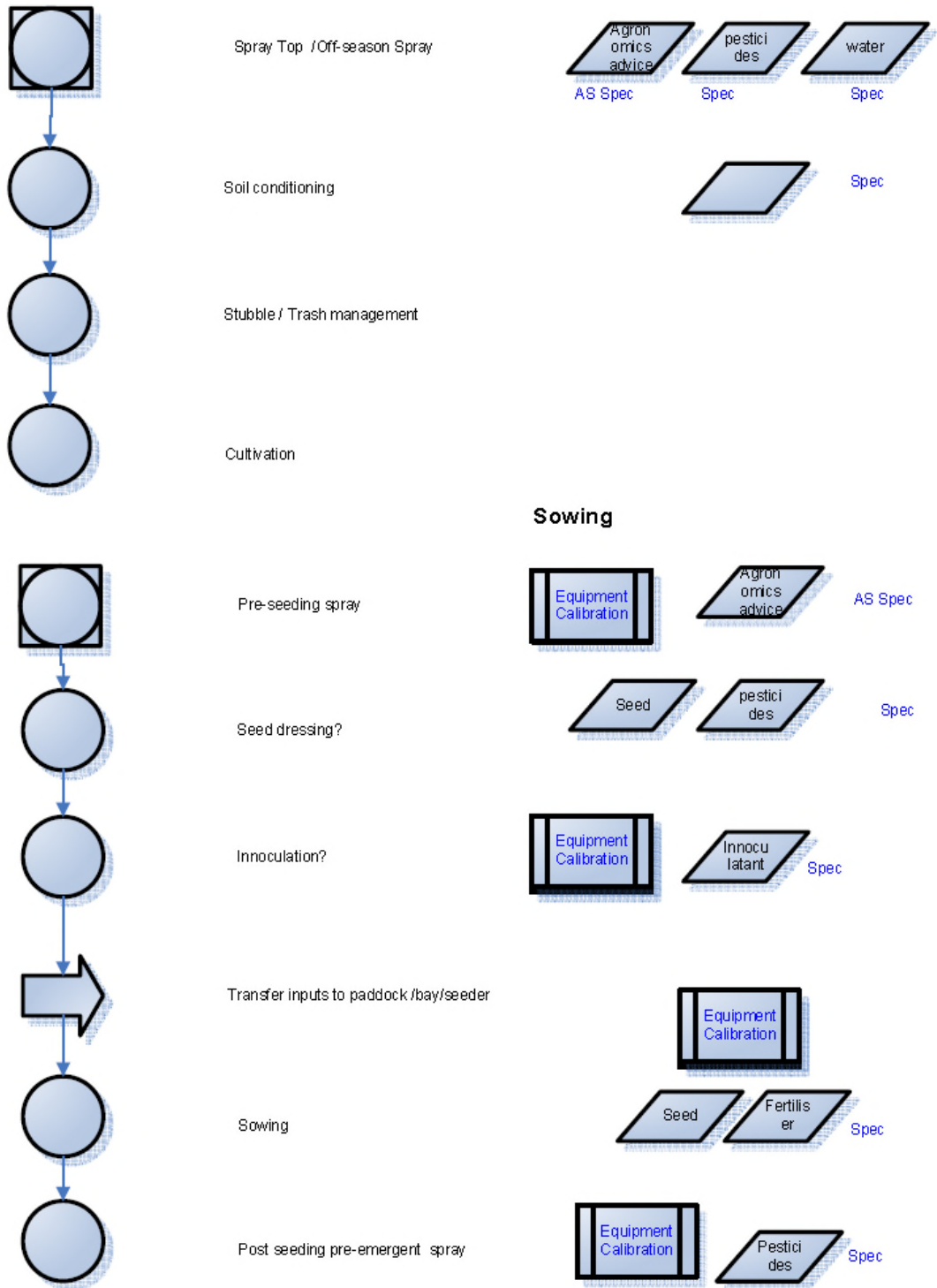
Legend of Symbols

	Operation		Input		Documented Standard Operating Procedure
	Inspection		Intermediate product		Supporting documentation
	Operation and Inspection		By-product or waste		
	Transfer or transport		Finished Product 25 Kg bag (Fin Prod Spec)		Text in BLUE requires product or service specification
	Storage		Finished Product 950 Kg bulker bag (Fin Prod Spec)		Text in RED requires clarification of situation
	Unintended delay				

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2 - Growing - 1

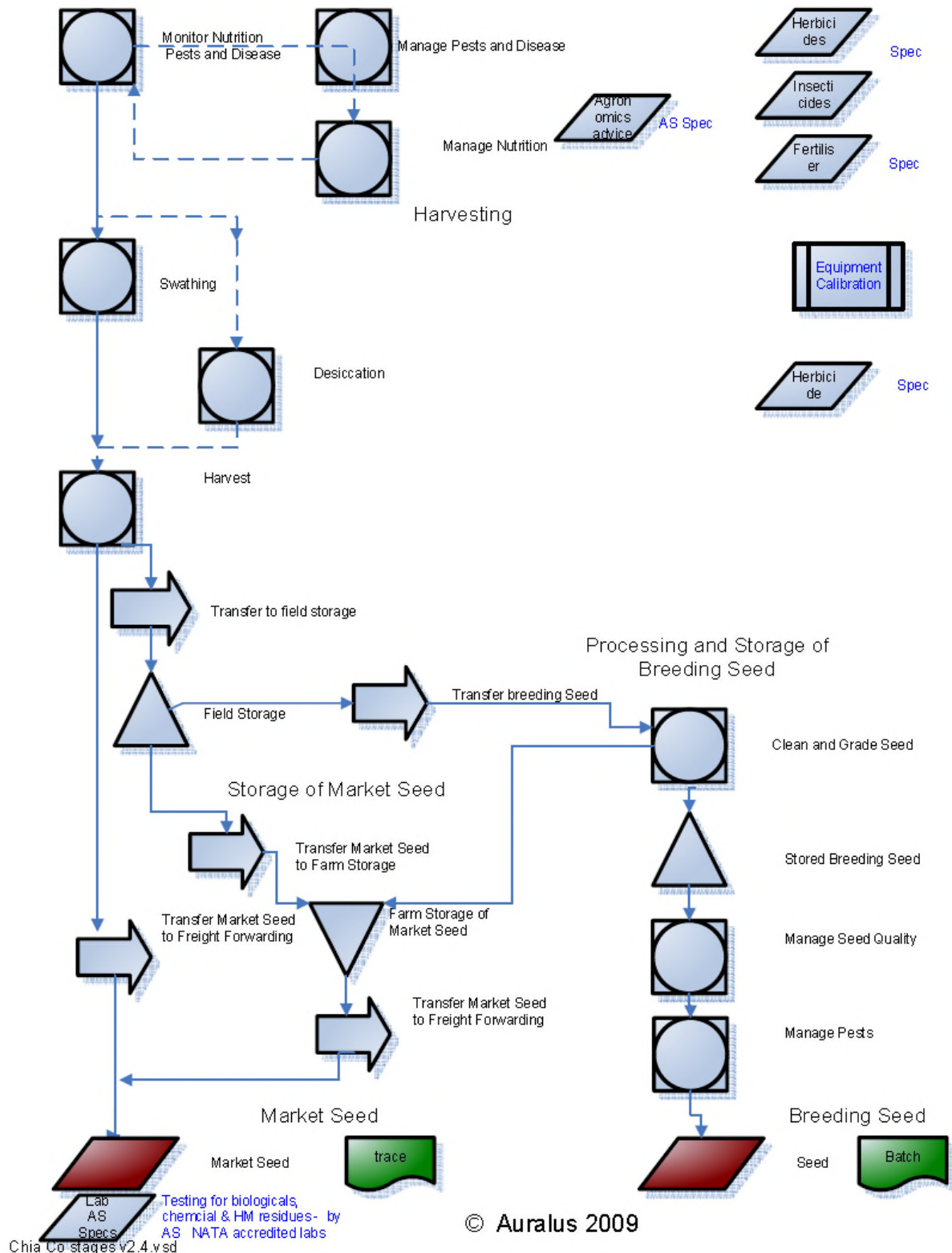
PADDOCK PREPARATION



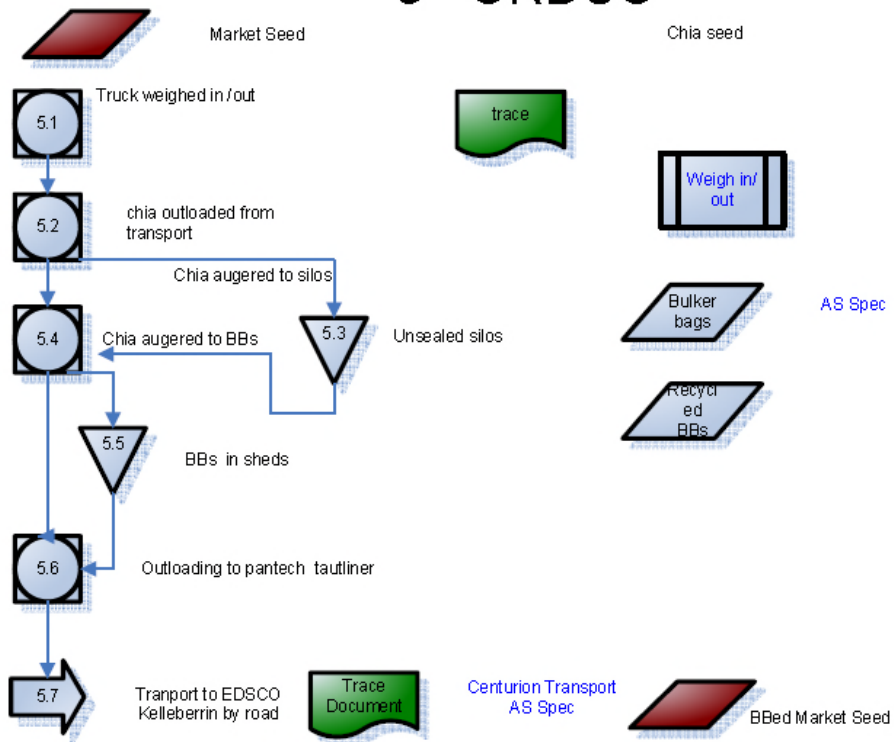
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Growing - 2

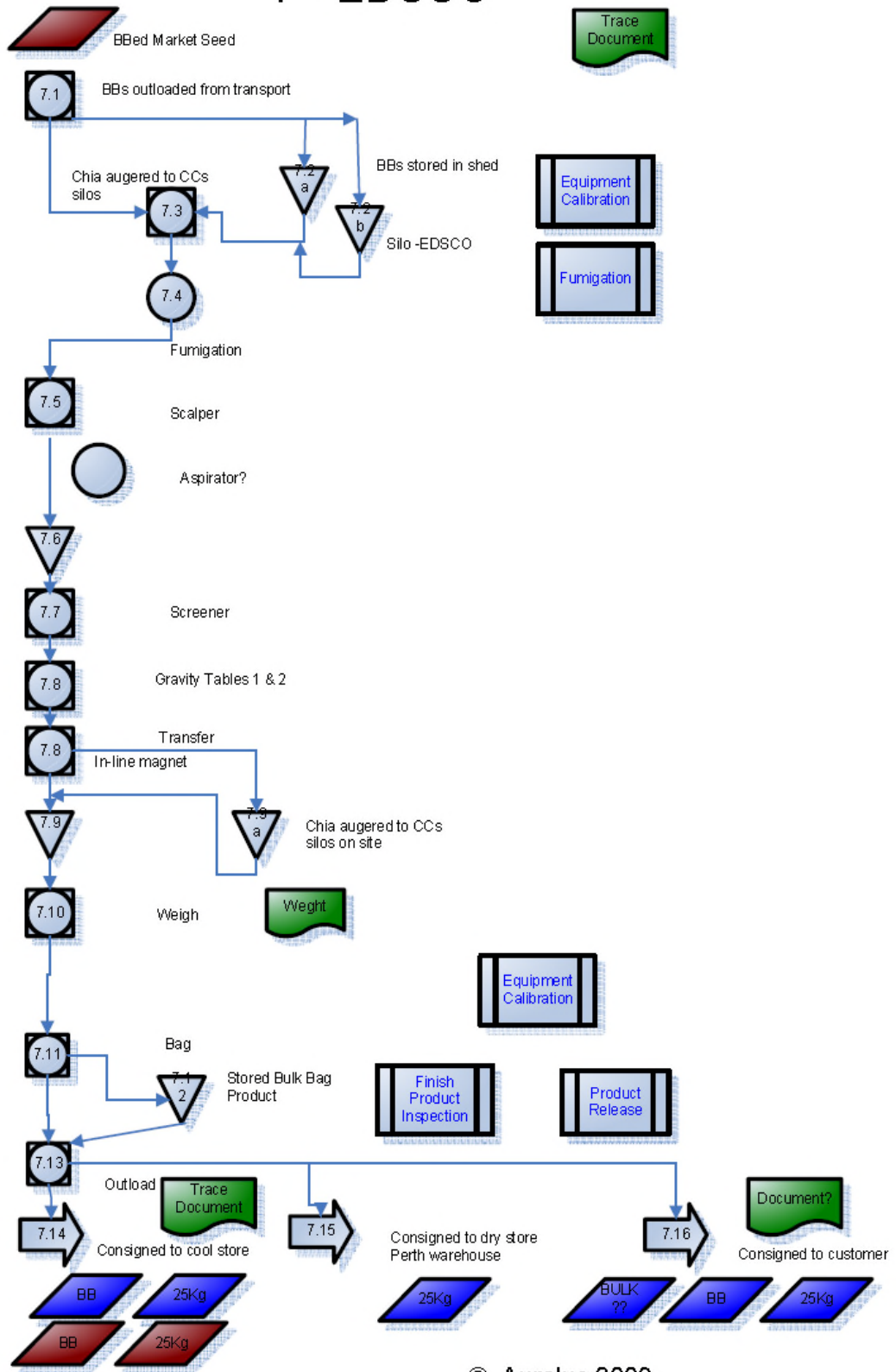
Growing Season



5 - ORDCO

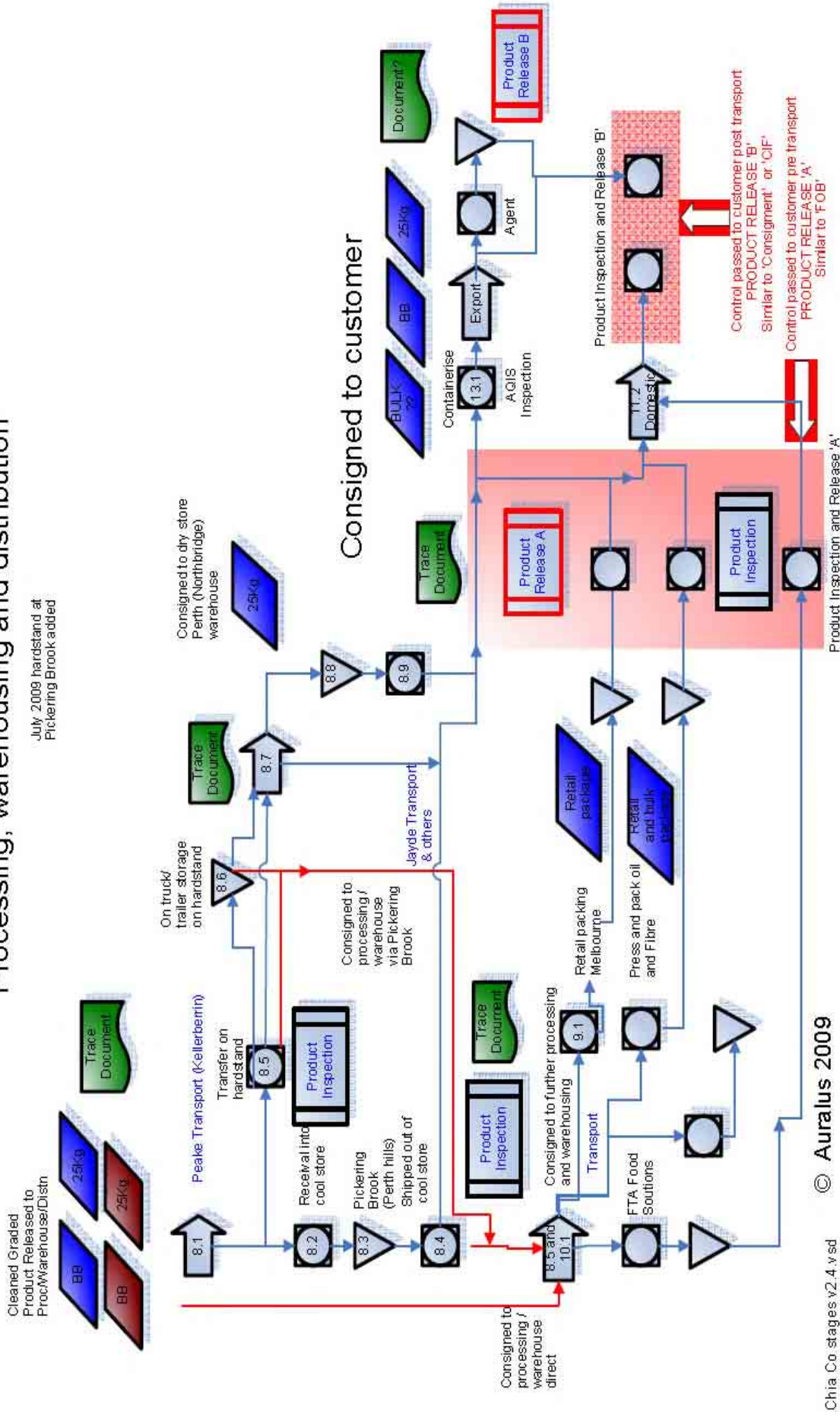


7 - EDSCO



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Processing, warehousing and distribution



July 2009 hardstand at Pickering Brook added

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Chia Co stages v2.4.v sd

Appendix 2: Composition of the Chia of THE CHIA COMPANY



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Client	: CHIA AUSTRALIA PTY LTD SUITE 6 NEWCASTLE MEWS 628 - 630 NEWCASTLE STREET LEEDERVILLE WA 6007	Job No.	: CHIAO1/090219
Attention	: Natasha Jesske	Quote No.	: QT-01588
Project Name	:	Order No.	:
Your Client Services Manager	: Tim Stobaus	Date Sampled	: 18-FEB-2009
		Date Received	: 19-FEB-2009
		Sampled By	: CLIENT
		Phone	: (03) 9644 4849

Lab Reg No.	Sample Ref	Sample Description
V09/004439	09BD022	White Oasis
V09/004440	09BD023	Black Barradale
V09/004441	09BD048	White Oasis
V09/004442	09BD049	Black Oasis

Lab Reg No.		V09/004439	V09/004440	V09/004441	V09/004442	
Sample Reference	Units	09BD022	09BD023	09BD048	09BD049	Method
Trace Elements						
Calcium	mg/kg	5900	5100	6300	6200	VL247
Iron	mg/kg	150	70	74	61	VL247
Magnesium	mg/kg	3800	3300	3900	3500	VL247
Manganese	mg/kg	53	38	53	34	VL247
Phosphorus	mg/kg	7500	6900	7900	7300	VL247
Potassium	mg/kg	6600	5600	6800	6200	VL247
Sodium	mg/100g	6.0	<1.0	<1.0	<1.0	VL247


 Paul Adorno, Section Manager
 Inorganics - Vic

6-JUL-2009

Lab Reg No.		V09/004439	V09/004440	V09/004441	V09/004442	
Sample Reference	Units	09BD022	09BD023	09BD048	09BD049	Method
Proximates						
Fructose	g/100g	<0.2	<0.2	<0.2	<0.2	VL295
Glucose	g/100g	<0.2	<0.2	<0.2	<0.2	VL295
Sucrose	g/100g	0.3	0.3	0.4	0.3	VL295
Maltose	g/100g	<0.2	<0.2	<0.2	<0.2	VL295
Lactose	g/100g	<0.2	<0.2	<0.2	<0.2	VL295
Total Sugars	g/100g	<1	<1	<1	<1	VL295
Moisture	g/100g	4.5	4.4	4.5	5.0	VL298
Fat (Mojonnier extraction)	g/100g	34.3	30.9	32.5	30.6	VL302

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Lab Reg No.		V09/004439	V09/004440	V09/004441	V09/004442	
Sample Reference	Units	09BD022	09BD023	09BD048	09BD049	Method
Proximates						
Saturated Fat	g/100g	3.6	3.2	3.4	3.0	VL289
Protein (N x 5.7)	g/100g	19.4	22.4	20.8	20.0	VL299
Ash	g/100g	5.1	4.8	5.1	5.0	VL286
Carbohydrates	g/100g	2	3	2	5	
Energy (kj)	kJ/100g	1910	1850	1870	1830	
Mono trans fats	g/100g	< 0.1	< 0.1	< 0.1	< 0.1	VL289
Mono-unsaturated fat	g/100g	2.9	2.5	2.7	2.4	VL289
Omega 3 fats	g/100g	20.6	19.1	19.6	18.8	VL289
Omega 6 fats	g/100g	7.1	6.0	6.7	6.2	VL289
Poly trans fats	g/100g	0.1	0.1	0.1	0.1	VL289
Poly-unsaturated fat	g/100g	27.5	24.9	26.2	24.9	VL289
Trans fats	g/100g	0.1	0.1	0.1	0.1	VL289
Saturated Triglycerides in Extracted Fat						
C4:0 Butyric	%	< 0.1	< 0.1	< 0.1	< 0.1	VL289
C6:0 Caproic	%	< 0.1	< 0.1	< 0.1	< 0.1	VL289
C8:0 Caprylic	%	< 0.1	< 0.1	< 0.1	< 0.1	VL289
C10:0 Capric	%	< 0.1	< 0.1	< 0.1	< 0.1	VL289
C12:0 Lauric	%	< 0.1	< 0.1	< 0.1	< 0.1	VL289
C14:0 Myristic	%	< 0.1	< 0.1	< 0.1	< 0.1	VL289
C15:0 Pentadecanoic	%	< 0.1	< 0.1	< 0.1	< 0.1	VL289
C16:0 Palmitic	%	6.6	6.8	6.6	6.5	VL289
C17:0 Margaric	%	< 0.1	< 0.1	< 0.1	< 0.1	VL289
C18:0 Stearic	%	3.6	3.4	3.6	3.2	VL289
C20:0 Arachidic	%	0.3	0.3	0.3	0.3	VL289
C22:0 Behenic	%	< 0.1	< 0.1	< 0.1	< 0.1	VL289
C24:0 Lignoceric	%	< 0.1	< 0.1	< 0.1	< 0.1	VL289
Total Saturated	%	10.5	10.5	10.4	9.9	VL289
Mono-unsaturated Triglycerides in Extracted Fat						
C14:1 Myristoleic	%	< 0.1	< 0.1	< 0.1	< 0.1	VL289
C16:1 Palmitoleic	%	0.2	0.2	0.2	0.2	VL289
C17:1 Heptadecenoic	%	< 0.1	< 0.1	< 0.1	< 0.1	VL289
C18:1 Oleic	%	8.1	7.7	8.1	7.6	VL289
C20:1 Eicosenic	%	< 0.1	< 0.1	< 0.1	< 0.1	VL289
C22:1 Docosenoic	%	< 0.1	< 0.1	< 0.1	< 0.1	VL289
C24:1 Nervonic	%	< 0.1	< 0.1	< 0.1	< 0.1	VL289
Total Mono-unsaturated	%	8.3	7.9	8.3	7.8	VL289
Poly-unsaturated Triglycerides in Extracted Fat						
C18:2w6 Linoleic	%	20.7	19.4	20.5	20.3	VL289
C18:3w6 gamma-Linolenic	%	< 0.1	< 0.1	< 0.1	< 0.1	VL289
C18:3w3 alpha-Linolenic	%	60.0	61.7	60.4	61.4	VL289
C20:2w6 Eicosadienoic	%	< 0.1	< 0.1	< 0.1	< 0.1	VL289
C20:3w6 Eicosatrienoic	%	< 0.1	< 0.1	< 0.1	< 0.1	VL289
C20:3w3 Eicosatrienoic	%	< 0.1	< 0.1	< 0.1	< 0.1	VL289

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Lab Reg No.		V09/004439	V09/004440	V09/004441	V09/004442	
Sample Reference		09BD022	09BD023	09BD048	09BD049	
	Units					Method
Poly-unsaturated Triglycerides in Extracted Fat						
C20:4w6 Arachidonic	%	< 0.1	< 0.1	< 0.1	< 0.1	VL289
C20:5w3 Eicosapentaenoic	%	< 0.1	< 0.1	< 0.1	< 0.1	VL289
C22:2w6 Docosadienoic	%	< 0.1	< 0.1	< 0.1	< 0.1	VL289
Omega 3 Fatty Acids	%	60.0	61.7	60.4	61.4	VL289
Omega 6 Fatty Acids	%	20.7	19.4	20.5	20.3	VL289
C22:4w6 Docosatetraenoic	%	< 0.1	< 0.1	< 0.1	< 0.1	VL289
C22:5w3 Docosapentaenoic	%	< 0.1	< 0.1	< 0.1	< 0.1	VL289
C22:6w3 Docosahexaenoic	%	< 0.1	< 0.1	< 0.1	< 0.1	VL289
Total Poly-unsaturated	%	80.3	80.7	80.5	81.4	VL289
Total Mono Trans Fatty Acids	%	< 0.1	< 0.1	< 0.1	< 0.1	VL289
Total Poly Trans Fatty Acids	%	0.4	0.4	0.4	0.4	VL289
P:M:S Ratio		4.2:8.6:1.0	7.8:0.8:1.0	7.8:0.8:1.0	8.2:0.8:1.0	VL289
Vitamins						
Ascorbic Acid	mg/100g	5.8	5.8	5.0	4.6	VL301
alpha-Tocopherol	mg/100g	0.2	0.3	0.2	0.2	VL291


 Paul Adorno, Section Manager
 Food Composition - Vic


 Neil Menz, Analyst
 Food Composition - Vic


 Sant Barone, Chemist
 Organics - Vic

6-JUL-2009

Lab Reg No.		V09/004439	V09/004440	V09/004441	V09/004442	
Sample Reference		09BD022	09BD023	09BD048	09BD049	
	Units					Method
Proximates						
Total Dietary Fibre	g/100g	35.2	34.1	35.1	34.2	

V09/004439
 Fibre determined by Agrifood Technology, Werribee Vic. NATA Accred. 2726.
 Agrifood Report No: 23651

V09/004440
 Fibre determined by BRI Research Pty Ltd, North Ryde NSW.
 BRI Report No: 72224

V09/004441
 Fibre determined by Agrifood Technology, Werribee Vic. NATA Accred. 2726.
 Agrifood Report No: 23651

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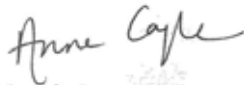
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V09/004442

Fibre determined by Agrifood Technology, Werribee Vic. NATA Accred. 2726.
Agrifood Report No: 23040



Anne Coyle
Laboratory Services Unit - Vic

6-JUL-2009

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Client	: CHIA AUSTRALIA PTY LTD SUITE 6 NEWCASTLE MEWS 628 - 630 NEWCASTLE STREET LEEDERVILLE WA 6007	Job No.	: CHIA01/090219
		Quote No.	: QT-01588
		Order No.	:
		Date Sampled	: 18-FEB-2009
		Date Received	: 19-FEB-2009
Attention	: Natasha Jesske	Sampled By	: CLIENT
Project Name	:		
Your Client Services Manager	: Tim Stobaus	Phone	: (03) 9644 4849

Lab Reg No.	Sample Ref	Sample Description
V09/004443	09BD057	White Oasis
V09/004445	09BD059	White Barradale
V09/004446	09BD060	Black Bathkamp
V09/004447	09BD061	Black Oasis

Lab Reg No.		V09/004443	V09/004445	V09/004446	V09/004447	
Sample Reference	Units	09BD057	09BD059	09BD060	09BD061	Method
Trace Elements						
Calcium	mg/kg	5600	5000	5300	5300	VL247
Iron	mg/kg	65	63	81	61	VL247
Magnesium	mg/kg	4300	3400	3400	3400	VL247
Manganese	mg/kg	44	38	41	34	VL247
Phosphorus	mg/kg	8700	7200	7300	7100	VL247
Potassium	mg/kg	7100	5600	6100	5800	VL247
Sodium	mg/100g	< 1.0	< 1.0	< 1.0	< 1.0	VL247


 Paul Adorno, Section Manager
 Inorganics - Vic

6-JUL-2009

Lab Reg No.		V09/004443	V09/004445	V09/004446	V09/004447	
Sample Reference	Units	09BD057	09BD059	09BD060	09BD061	Method
Proximates						
Fructose	g/100g	< 0.2	< 0.2	< 0.2	< 0.2	VL295
Glucose	g/100g	< 0.2	< 0.2	< 0.2	< 0.2	VL295
Sucrose	g/100g	0.2	0.5	0.3	0.5	VL295
Maltose	g/100g	< 0.2	< 0.2	< 0.2	< 0.2	VL295
Lactose	g/100g	< 0.2	< 0.2	< 0.2	< 0.2	VL295
Total Sugars	g/100g	< 1	< 1	< 1	< 1	VL295
Moisture	g/100g	4.3	4.5	4.1	4.6	VL298
Fat (Mojonnier extraction)	g/100g	33.5	29.0	30.7	28.5	VL302

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Lab Reg No.		V09/004443	V09/004445	V09/004446	V09/004447	
Sample Reference	Units	09BD057	09BD059	09BD060	09BD061	Method
Proximates						
Saturated Fat	g/100g	3.5	3.1	3.4	3.7	VL289
Protein (N x 5.7)	g/100g	18.1	20.9	19.5	19.0	VL299
Ash	g/100g	5.2	5.2	5.6	5.4	VL286
Carbohydrates	g/100g	3	5	6	6	
Energy (kJ)	kJ/100g	1890	1790	1840	1770	
Mono trans fats	g/100g	< 0.1	< 0.1	< 0.1	< 0.1	VL289
Mono-unsaturated fat	g/100g	2.7	2.4	2.7	3.0	VL289
Omega 3 fats	g/100g	20.5	17.5	17.9	20.3	VL289
Omega 6 fats	g/100g	6.7	5.8	6.6	7.7	VL289
Poly trans fats	g/100g	0.1	0.1	0.1	0.1	VL289
Poly-unsaturated fat	g/100g	27.1	23.3	24.4	27.8	VL289
Trans fats	g/100g	0.1	0.1	0.1	0.1	VL289
Saturated Triglycerides in Extracted Fat						
C4:0 Butyric	%	< 0.1	< 0.1	< 0.1	< 0.1	VL289
C6:0 Caproic	%	< 0.1	< 0.1	< 0.1	< 0.1	VL289
C8:0 Caprylic	%	< 0.1	< 0.1	< 0.1	< 0.1	VL289
C10:0 Capric	%	< 0.1	< 0.1	< 0.1	< 0.1	VL289
C12:0 Lauric	%	< 0.1	< 0.1	< 0.1	< 0.1	VL289
C14:0 Myristic	%	< 0.1	< 0.1	< 0.1	< 0.1	VL289
C15:0 Pentadecanoic	%	< 0.1	< 0.1	< 0.1	< 0.1	VL289
C16:0 Palmitic	%	6.5	6.7	7.0	6.8	VL289
C17:0 Margaric	%	< 0.1	< 0.1	< 0.1	< 0.1	VL289
C18:0 Stearic	%	3.5	3.7	3.6	3.4	VL289
C20:0 Arachidic	%	0.3	0.3	0.3	0.3	VL289
C22:0 Behenic	%	< 0.1	< 0.1	< 0.1	< 0.1	VL289
C24:0 Lignoceric	%	< 0.1	< 0.1	0.1	0.1	VL289
Total Saturated	%	10.3	10.7	10.9	10.6	VL289
Mono-unsaturated Triglycerides in Extracted Fat						
C14:1 Myristoleic	%	< 0.1	< 0.1	< 0.1	< 0.1	VL289
C16:1 Palmitoleic	%	0.2	0.2	0.2	0.2	VL289
C17:1 Heptadecenoic	%	< 0.1	< 0.1	< 0.1	< 0.1	VL289
C18:1 Oleic	%	7.8	8.0	8.5	8.4	VL289
C20:1 Eicosenic	%	< 0.1	< 0.1	< 0.1	< 0.1	VL289
C22:1 Docosenoic	%	< 0.1	< 0.1	< 0.1	< 0.1	VL289
C24:1 Nervonic	%	< 0.1	< 0.1	< 0.1	< 0.1	VL289
Total Mono-unsaturated	%	8.0	8.2	8.7	8.6	VL289
Poly-unsaturated Triglycerides in Extracted Fat						
C18:2w6 Linoleic	%	20.1	20.1	21.6	22.2	VL289
C18:3w6 gamma-Linolenic	%	< 0.1	< 0.1	< 0.1	< 0.1	VL289
C18:3w3 alpha-Linolenic	%	61.1	60.5	58.3	58.2	VL289
C20:2w6 Eicosadienoic	%	< 0.1	< 0.1	< 0.1	< 0.1	VL289
C20:3w6 Eicosatrienoic	%	< 0.1	< 0.1	< 0.1	< 0.1	VL289
C20:3w3 Eicosatrienoic	%	< 0.1	< 0.1	< 0.1	< 0.1	VL289

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Lab Reg No.		V09/004443	V09/004445	V09/004446	V09/004447	
Sample Reference		09BD057	09BD059	09BD060	09BD061	
	Units					Method
Poly-unsaturated Triglycerides in Extracted Fat						
C20:4w6 Arachidonic	%	< 0.1	< 0.1	< 0.1	< 0.1	VL289
C20:5w3 Eicosapentaenoic	%	< 0.1	< 0.1	< 0.1	< 0.1	VL289
C22:2w6 Docosadienoic	%	< 0.1	< 0.1	< 0.1	< 0.1	VL289
Omega 3 Fatty Acids	%	61.1	60.5	58.3	58.2	VL289
Omega 6 Fatty Acids	%	20.1	20.1	21.6	22.2	VL289
C22:4w6 Docosatetraenoic	%	< 0.1	< 0.1	< 0.1	< 0.1	VL289
C22:5w3 Docosapentaenoic	%	< 0.1	< 0.1	< 0.1	< 0.1	VL289
C22:6w3 Docosahexaenoic	%	< 0.1	< 0.1	< 0.1	< 0.1	VL289
Total Poly-unsaturated	%	80.9	80.2	79.6	80.0	VL289
Total Mono Trans Fatty Acids	%	< 0.1	< 0.1	< 0.1	< 0.1	VL289
Total Poly Trans Fatty Acids	%	0.4	0.4	0.4	0.4	VL289
P:M:S Ratio		7.9:0.8:1.0	7.5:0.8:1.0	7.3:0.8:1.0	7.6:0.8:1.0	VL289
Vitamins						
Ascorbic Acid	mg/100g	5.6	6.0	4.1	4.2	VL301
alpha-Tocopherol	mg/100g	0.2	0.2	0.3	0.3	VL291


 Paul Adorno, Section Manager
 Food Composition - Vic


 Neil Menz, Analyst
 Food Composition - Vic


 Sant Barone, Chemist
 Organics - Vic

6-JUL-2009

Lab Reg No.		V09/004443	V09/004445	V09/004446	V09/004447	
Sample Reference		09BD057	09BD059	09BD060	09BD061	
	Units					Method
Proximates						
Total Dietary Fibre	g/100g	36.3	35.1	34.1	36.6	

V09/004443
 Fibre determined by Agrifood Technology, Werribee Vic. NATA Accred. 2726.
 Agrifood Report No: 23040

V09/004445
 Fibre determined by Agrifood Technology, Werribee Vic. NATA Accred. 2726.
 Agrifood Report No: 23651

V09/004446
 Fibre determined by Agrifood Technology, Werribee Vic. NATA Accred. 2726.
 Agrifood Report No: 23040

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V09/004447

Fibre determined by Agrifood Technology, Werribee Vic. NATA Accred. 2726.
Agrifood Report No: 23651



Anne Coyle
Laboratory Services Unit - Vic

6-JUL-2009



Australian Government
National Measurement Institute

RE-ISSUED REPORT OF ANALYSIS

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 Report No. RN740732

Client	: CHIA AUSTRALIA PTY LTD SUITE 6 NEWCASTLE MEWS 628 - 630 NEWCASTLE STREET LEEDERVILLE WA 6007	Job No.	: CHIA01/090518
Attention	: Natasha Jesske	Quote No.	: QT-01588
Project Name	:	Order No.	:
Your Client Services Manager	: Tim Stobaus	Date Sampled	: 17-MAY-2009
		Date Received	: 18-MAY-2009
		Sampled By	: CLIENT
		Phone	: (03) 9644 4849

Lab Reg No.	Sample Ref	Sample Description
V09/013099	09BD182	White
V09/013100	09BD225	Black
V09/013101	09BD226	Black
V09/013102	09BD227	White

Lab Reg No.		V09/013099	V09/013100	V09/013101	V09/013102	
Sample Reference	Units	09BD182	09BD225	09BD226	09BD227	Method
Trace Elements						
Calcium	mg/kg	6000	6100	5900	5400	VL247
Iron	mg/kg	57	62	73	82	VL247
Magnesium	mg/kg	3100	3400	4000	3900	VL247
Manganese	mg/kg	29	36	49	44	VL247
Phosphorus	mg/kg	6000	6800	8700	8100	VL247
Potassium	mg/kg	5100	5500	6900	6300	VL247
Sodium	mg/100g	< 1	< 1	< 1	< 1	VL247


 Paul Adorno, Section Manager
 Inorganics - Vic

12-JUN-2009

Lab Reg No.		V09/013099	V09/013100	V09/013101	V09/013102	
Sample Reference	Units	09BD182	09BD225	09BD226	09BD227	Method
Proximates						
Fructose	g/100g	< 0.2	< 0.2	< 0.2	< 0.2	VL295
Glucose	g/100g	< 0.2	< 0.2	< 0.2	< 0.2	VL295
Sucrose	g/100g	0.5	0.4	0.7	0.4	VL295
Maltose	g/100g	< 0.2	< 0.2	< 0.2	< 0.2	VL295
Lactose	g/100g	< 0.2	< 0.2	< 0.2	< 0.2	VL295
Total Sugars	g/100g	< 1	< 1	< 1	< 1	VL295
Moisture	g/100g	3.9	3.2	4.1	4.4	VL298
Fat (Mojonnier extraction)	g/100g	33.2	34.2	30.1	27.3	VL302

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RE-ISSUED REPORT OF ANALYSIS

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Lab Reg No.		V09/013099	V09/013100	V09/013101	V09/013102	
Sample Reference		098D182	098D225	098D226	098D227	
	Units					Method
Proximates						
Saturated Fat	g/100g	3.7	3.7	3.6	3.4	VL289
Protein (N x 5.7)	g/100g	17.4	19.2	19.4	21.3	VL299
Ash	g/100g	4.5	4.7	5.2	4.9	VL286
Carbohydrates	g/100g	4	2	1	4	
Energy (kJ)	kJ/100g	1890	1920	1780	1740	
Mono trans fats	g/100g	<0.1	<0.1	<0.1	<0.1	VL289
Mono-unsaturated fat	g/100g	2.7	2.6	2.7	2.5	VL289
Omega 3 fats	g/100g	18.9	19.9	16.2	14.7	VL289
Omega 6 fats	g/100g	6.6	6.6	6.5	5.6	VL289
Poly trans fats	g/100g	0.1	0.1	0.1	0.1	VL289
Poly-unsaturated fat	g/100g	25.3	26.4	22.5	20.2	VL289
Trans fats	g/100g	0.1	0.1	0.1	0.1	VL289
Saturated Triglycerides in Extracted Fat						
C4:0 Butyric	%	<0.1	<0.1	<0.1	<0.1	VL289
C6:0 Caproic	%	<0.1	<0.1	<0.1	<0.1	VL289
C8:0 Caprylic	%	<0.1	<0.1	<0.1	<0.1	VL289
C10:0 Capric	%	<0.1	<0.1	<0.1	<0.1	VL289
C12:0 Lauric	%	<0.1	<0.1	<0.1	<0.1	VL289
C14:0 Myristic	%	<0.1	<0.1	<0.1	<0.1	VL289
C15:0 Pentadecanoic	%	<0.1	<0.1	<0.1	<0.1	VL289
C16:0 Palmitic	%	7.0	7.1	7.6	7.7	VL289
C17:0 Margaric	%	<0.1	<0.1	<0.1	<0.1	VL289
C18:0 Stearic	%	3.7	3.3	3.7	4.4	VL289
C20:0 Arachidic	%	0.3	0.3	0.3	0.3	VL289
C22:0 Behenic	%	<0.1	<0.1	<0.1	<0.1	VL289
C24:0 Lignoceric	%	0.1	0.1	0.1	0.1	VL289
Total Saturated	%	11.1	10.8	11.8	12.5	VL289
Mono-unsaturated Triglycerides in Extracted Fat						
C14:1 Myristoleic	%	<0.1	<0.1	<0.1	<0.1	VL289
C16:1 Palmitoleic	%	0.2	0.2	0.3	0.3	VL289
C17:1 Heptadecenoic	%	<0.1	<0.1	<0.1	<0.1	VL289
C18:1 Oleic	%	8.1	7.6	9.0	9.2	VL289
C20:1 Eicosenic	%	<0.1	<0.1	<0.1	<0.1	VL289
C22:1 Docosenoic	%	<0.1	<0.1	<0.1	<0.1	VL289
C24:1 Nervonic	%	<0.1	<0.1	<0.1	<0.1	VL289
Total Mono-unsaturated	%	8.4	7.8	9.2	9.4	VL289
Poly-unsaturated Triglycerides in Extracted Fat						
C18:2w6 Linoleic	%	20.7	20.3	22.4	21.3	VL289
C18:3w6 gamma-Linolenic	%	<0.1	<0.1	<0.1	<0.1	VL289
C18:3w3 alpha-Linolenic	%	59.4	60.7	56.2	56.4	VL289
C20:2w6 Eicosadienoic	%	<0.1	<0.1	<0.1	<0.1	VL289
C20:3w6 Eicosatrienoic	%	<0.1	<0.1	<0.1	<0.1	VL289
C20:3w3 Eicosatrienoic	%	<0.1	<0.1	<0.1	<0.1	VL289

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Lab Reg No.		V09/013099	V09/013100	V09/013101	V09/013102	
Sample Reference		09BD182	09BD225	09BD226	09BD227	
	Units					Method
Poly-unsaturated Triglycerides in Extracted Fat						
C20:4w6 Arachidonic	%	<0.1	<0.1	<0.1	<0.1	VL289
C20:5w3 Eicosapentaenoic	%	<0.1	<0.1	<0.1	<0.1	VL289
C22:2w6 Docosadienoic	%	<0.1	<0.1	<0.1	<0.1	VL289
Omega 3 Fatty Acids	%	59.4	60.7	56.2	56.4	VL289
Omega 6 Fatty Acids	%	20.7	20.3	22.4	21.3	VL289
C22:4w6 Docosatetraenoic	%	<0.1	<0.1	<0.1	<0.1	VL289
C22:5w3 Docosapentaenoic	%	<0.1	<0.1	<0.1	<0.1	VL289
C22:6w3 Docosahexaenoic	%	<0.1	<0.1	<0.1	<0.1	VL289
Total Poly-unsaturated	%	79.7	80.6	78.3	77.3	VL289
Total Mono Trans Fatty Acids	%	<0.1	<0.1	<0.1	<0.1	VL289
Total Poly Trans Fatty Acids	%	0.4	0.4	0.4	0.4	VL289
P:M:S Ratio		7.2:0.8:1.0	7.5:0.7:1.0	6.7:0.8:1.0	6.2:0.8:1.0	VL289
Vitamins						
Ascorbic Acid	mg/100g	5.5	<1	<1	<1	VL301
alpha-tocopherol	mg/100g	<0.1	<0.1	<0.1	<0.1	VL291
beta-tocopherol	mg/100g	<0.1	<0.1	<0.1	<0.1	VL291
delta-tocopherol	mg/100g	0.2	0.2	0.2	0.2	VL291
gamma-tocopherol	mg/100g	5.7	6.1	6.0	5.3	VL291

V09/013099
 -V09/013106
 Total Dietary Fibre determined by BRI Research, North Ryde NSW.
 BRI Report no: 72384

SK Nahar

Dr. Nahar Syeda, Analyst
 Food Composition - Vic

Neil Menz

Neil Menz, Analyst
 Food Composition - Vic

Sam Barone

Sam Barone, Chemist
 Organics - Vic

12-JUN-2009

Lab Reg No.		V09/013099	V09/013100	V09/013101	V09/013102	
Sample Reference		09BD182	09BD225	09BD226	09BD227	
	Units					Method
Proximates						
Total Dietary Fibre	g/100g	37.4	37.1	39.8	38.1	

Appendix 3: Comparative test results for the 2006 crop initially tested in July 2007 and re- tested in March 2009



Australian Government
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REPORT OF ANALYSIS

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Client	: CHIA AUSTRALIA PTY LTD SUITE 6 NEWCASTLE MEWS 628 - 630 NEWCASTLE STREET LEEDERVILLE WA 6007	Job No.	: CHIA01/070716
Attention	: Natasha Jesske	Quote No.	: QT-01406
Project Name	:	Order No.	:
Your Client Services Manager	: Tim Stobaus	Date Sampled	:
		Date Received	: 16-JUL-2007
		Sampled By	: CLIENT
		Phone	: (03) 9685 1747

Lab Reg No.	Sample Ref	Sample Description
V07/017430	B	Black Seeds
V07/017431	W	White Seeds

Lab Reg No.		V07/017430	V07/017431			
Sample Reference	Units	B	W			Method
Trace Elements						
Calcium	mg/kg	5100	5000			VL247
Iron	mg/kg	64	60			VL247
Magnesium	mg/kg	2900	2900			VL247
Manganese	mg/kg	28	28			VL247
Phosphorus	mg/kg	6000	6200			VL247
Potassium	mg/kg	5300	5200			VL247
Sodium	mg/100g	< 1.0	< 1.0			VL247

V07/017431

Paul Adorno, Section Manager
 Inorganics - Vic

13-AUG-2007

Lab Reg No.		V07/017430	V07/017431			
Sample Reference	Units	B	W			Method
Proximates						
Saturated Fat	g/100g	4.0	3.9			VL289
Mono trans fats	g/100g	< 0.1	0.2			VL289
Mono-unsaturated fat	g/100g	3.1	3.2			VL289
Omega 3 fats	g/100g	19.8	19.5			VL289
Omega 6 fats	g/100g	7.3	7.5			VL289
Poly trans fats	g/100g	0.2	0.2			VL289
Poly-unsaturated fat	g/100g	27.2	27.0			VL289

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Lab Reg No.		V07/017430	V07/017431		
Sample Reference	Units	B	W		Method
Proximates					
Trans fats	g/100g	0.3	0.3		VL289
Saturated Triglycerides in Extracted Fat					
C4:0 Butyric	%	<0.1	<0.1		VL289
C6:0 Caproic	%	<0.1	<0.1		VL289
C8:0 Caprylic	%	<0.1	<0.1		VL289
C10:0 Capric	%	<0.1	<0.1		VL289
C12:0 Lauric	%	<0.1	<0.1		VL289
C14:0 Myristic	%	<0.1	<0.1		VL289
C15:0 Pentadecanoic	%	<0.1	<0.1		VL289
C16:0 Palmitic	%	7.3	7.2		VL289
C17:0 Margaric	%	<0.1	<0.1		VL289
C18:0 Stearic	%	3.9	3.9		VL289
C20:0 Arachidic	%	0.3	0.3		VL289
C22:0 Behenic	%	<0.1	<0.1		VL289
C24:0 Lignoceric	%	<0.1	<0.1		VL289
Total Saturated	%	11.5	11.4		VL289
Mono-unsaturated Triglycerides in Extracted Fat					
C14:1 Myristoleic	%	<0.1	<0.1		VL289
C16:1 Palmitoleic	%	0.2	0.2		VL289
C17:1 Heptadecenoic	%	<0.1	<0.1		VL289
C18:1 Oleic	%	8.7	9.0		VL289
C20:1 Eicosenic	%	0.1	0.1		VL289
C22:1 Docosenoic	%	<0.1	<0.1		VL289
C24:1 Nervonic	%	<0.1	<0.1		VL289
Total Mono-unsaturated	%	9.1	9.3		VL289
Poly-unsaturated Triglycerides in Extracted Fat					
C18:2w6 Linoleic	%	21.3	21.9		VL289
C18:3w6 gamma-Linolenic	%	<0.1	<0.1		VL289
C18:3w3 alpha-Linolenic	%	57.7	56.9		VL289
C20:2w6 Eicosadienoic	%	<0.1	<0.1		VL289
C20:3w6 Eicosatrienoic	%	<0.1	<0.1		VL289
C20:3w3 Eicosatrienoic	%	<0.1	<0.1		VL289
C20:4w6 Arachidonic	%	<0.1	<0.1		VL289
C20:5w3 Eicosapentaenoic	%	<0.1	<0.1		VL289
C22:2w6 Docosadienoic	%	<0.1	<0.1		VL289
Omega 3 Fatty Acids	%	57.7	56.9		VL289
Omega 6 Fatty Acids	%	21.3	21.9		VL289
C22:4w6 Docosatetraenoic	%	<0.1	<0.1		VL289
C22:5w3 Docosapentaenoic	%	<0.1	<0.1		VL289
C22:6w3 Docosahexaenoic	%	<0.1	<0.1		VL289
Total Poly-unsaturated	%	79.0	78.8		VL289
Total Mono Trans Fatty Acids	%	0.2	0.2		VL289
Total Poly Trans Fatty Acids	%	0.6	0.6		VL289

REPORT OF ANALYSIS

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Lab Reg No.		V07/017430	V07/017431			
Sample Reference	Units	B	W			Method
Poly-unsaturated Triglycerides in Extracted Fat						
P:M:S Ratio		6.9:0.8:1.0	6.9:0.8:1.0			VL289


 Sam Barone, Chemist
 Organics - Vic

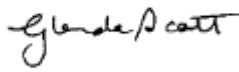
13-AUG-2007

Lab Reg No.		V07/017430	V07/017431			
Sample Reference	Units	B	W			Method
Allergens						
Gluten (Wheat Protein) Residue		ND	ND			VL356

ND = Not Detected.

V07/017430
 to V07/017431

Method: Biokits Gluten Assay
 Limit of reporting (semi-quantitative): 3 ppm (mg/kg)


 Glenda Scott, Analyst
 Microbiology - Vic

13-AUG-2007

Lab Reg No.		V07/017430	V07/017431			
Sample Reference	Units	B	W			Method
Proximates						
Fructose	g/100g	0.2	0.2			VL295
Glucose	g/100g	0.3	0.3			VL295
Sucrose	g/100g	0.4	0.4			VL295
Maltose	g/100g	< 0.2	< 0.2			VL295
Lactose	g/100g	< 0.2	< 0.2			VL295
Moisture	g/100g	6.3	6.4			VL298
Total Sugars	g/100g	< 1	< 1			VL295

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Lab Reg No.		V07/017430	V07/017431			
Sample Reference	Units	B	W			Method
Proximates						
Fat (Mojonnier extraction)	g/100g	34.4	34.2			VL302
Protein (N x 6.25)	g/100g	20.4	20.8			VL299
Ash	g/100g	4.5	4.6			VL286
Carbohydrates	g/100g	< 1	< 1			
Energy (kJ)	kJ/100g	1930	1920			
Starch		ND*	ND*			BRIS6
Total Dietary Fibre	g/100g	38.3	38.0			
Vitamins						
Ascorbic Acid	mg/100g	1.8	1.3			VL301
Thiamin	mg/100g	0.79	0.81			VL290
Riboflavin (Vitamin B2)	mg/100g	0.05	0.05			VL290
Niacin (Vitamin B3)	mg/100g	9.4	7.8			VL293
Retinol (Vitamin A)	ug/100g	< 5	< 5			VL287
alpha-Tocopherol	mg/100g	0.23	0.28			VL291
Cobalamin (B12)	ng/100g	90	110			
ORAC_Vit C Equivalence	umol/kg	135000	134000			VL370
ORAC_Vit E Equivalence	umol/kg	103000	102000			VL370
Total Folates	ug/100g	90	70			
Outsourced Tests						
Tryptophan	mg/g	2.14	1.83			
Miscellaneous						
Amino Acid Screen		148.63	143.71 m			
Insoluble Dietary Fibre	g/100g	33.0	30.9			
Soluble Fibre	g/100g	5.3	7.1			
Total Polyphenols	mg/kg	3000	3000			VL369

V07/017430

Comment : Total Polyphenols in samples V07/017430 and V07/017431 are expressed as Gallic Acid.

: Following folate results were tested and given by Royal Perth Hospital. Ref No: 326183

Cobalamin results determined by RPH - Ref: 326186-187

Total, Insoluble and Soluble Dietary Fibre results determined by BRI - Refs: N4609 and N4610

Quantitative Amino Acid Analysis (Total*) results determined by APAF

Tryptophan result (mg/g)* determined by APAF

Calculation based on amino acid residue mass in protein (molecular weight minus H2O)

Total Starch % results (Not Detected) determined by BRI Research - Refs: N4609-4610*

*Detection Limit: Less than 0.1%

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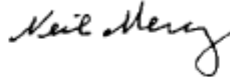
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V07/017431

Folate results determined by RPH - Refs: 326182-183



Paul Adorno, Section Manager
Food Composition - Vic



Neil Menz, Analyst
Food Composition - Vic



Tanya Casey
Laboratory Services Unit - Vic



Norbert Strobel, Analyst
Food Composition - Vic



Dr. Nahar Syeda, Analyst
Food Composition - Vic

13-AUG-2007

Results relate only to the sample(s) tested.

This Report supersedes reports: *RN628162* *RN629413* *RN629596* *RN631263*



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Client	: CHIA AUSTRALIA PTY LTD SUITE 6 NEWCASTLE MEWS 628 - 630 NEWCASTLE STREET LEEDERVILLE WA 6007	Job No.	: CHIA01/090302
Attention	: April Helliwell	Quote No.	: QT-01588
Project Name	:	Order No.	:
Your Client Services Manager	: Tim Stobaus	Date Sampled	: 2-MAR-2009
		Date Received	: 2-MAR-2009
		Sampled By	: CLIENT
		Phone	: (03) 9644 4849

Lab Reg No.	Sample Ref	Sample Description
V09/004951	1	Chia Seed

Lab Reg No.	Sample Reference	Units	V09/004951	Method
	1			
Trace Elements				
Sodium	mg/100g	< 1.0		VL247

Paul Adorno, Section Manager
 Inorganics - Vic

17-MAR-2009

Lab Reg No.	Sample Reference	Units	V09/004951	Method
	1			
Proximates				
Fructose	g/100g	< 0.2		VL295
Glucose	g/100g	< 0.2		VL295
Sucrose	g/100g	< 0.2		VL295
Maltose	g/100g	< 0.2		VL295
Lactose	g/100g	< 0.2		VL295
Total Sugars	g/100g	< 1		VL295
Moisture	g/100g	5.4		VL298
Fat (Mojonnier extraction)	g/100g	34.3		VL302
Saturated Fat	g/100g	3.9		VL289
Protein (N x 5.7)	g/100g	20.1		VL299
Ash	g/100g	4.5		VL286
Carbohydrates	g/100g	36		
Energy (kj)	kJ/100g	2220		
Mono trans fats	g/100g	< 0.1		VL289
Mono-unsaturated fat	g/100g	3.1		VL289
Omega 3 fats	g/100g	19.7		VL289
Omega 6 fats	g/100g	7.5		VL289

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Report No. RN727379

Lab Reg No.		V09/004951			
Sample Reference	Units	1			Method
Proximates					
Poly trans fats	g/100g	0.2			VL289
Poly-unsaturated fat	g/100g	27.1			VL289
Trans fats	g/100g	0.2			VL289
Saturated Triglycerides in Extracted Fat					
C4:0 Butyric	%	< 0.1			VL289
C6:0 Caproic	%	< 0.1			VL289
C8:0 Caprylic	%	< 0.1			VL289
C10:0 Capric	%	< 0.1			VL289
C12:0 Lauric	%	< 0.1			VL289
C14:0 Myristic	%	< 0.1			VL289
C15:0 Pentadecanoic	%	< 0.1			VL289
C16:0 Palmitic	%	7.1			VL289
C17:0 Margaric	%	< 0.1			VL289
C18:0 Stearic	%	3.7			VL289
C20:0 Arachidic	%	0.3			VL289
C22:0 Behenic	%	0.1			VL289
C24:0 Lignoceric	%	0.1			VL289
Total Saturated	%	11.4			VL289
Mono-unsaturated Triglycerides in Extracted Fat					
C14:1 Myristoleic	%	< 0.1			VL289
C16:1 Palmitoleic	%	0.3			VL289
C17:1 Heptadecenoic	%	< 0.1			VL289
C18:1 Oleic	%	8.7			VL289
C20:1 Eicosenic	%	< 0.1			VL289
C22:1 Docosenoic	%	< 0.1			VL289
C24:1 Nervonic	%	< 0.1			VL289
Total Mono-unsaturated	%	8.9			VL289
Poly-unsaturated Triglycerides in Extracted Fat					
C18:2w6 Linoleic	%	22.0			VL289
C18:3w6 gamma-Linolenic	%	< 0.1			VL289
C18:3w3 alpha-Linolenic	%	57.4			VL289
C20:2w6 Eicosadienoic	%	< 0.1			VL289
C20:3w6 Eicosatrienoic	%	< 0.1			VL289
C20:3w3 Eicosatrienoic	%	< 0.1			VL289
C20:4w6 Arachidonic	%	< 0.1			VL289
C20:5w3 Eicosapentaenoic	%	< 0.1			VL289
C22:2w6 Docosadienoic	%	< 0.1			VL289
Omega 3 Fatty Acids	%	57.4			VL289
Omega 6 Fatty Acids	%	22.0			VL289
C22:4w6 Docosatetraenoic	%	< 0.1			VL289
C22:5w3 Docosapentaenoic	%	< 0.1			VL289
C22:6w3 Docosahexaenoic	%	< 0.1			VL289
Total Poly-unsaturated	%	79.0			VL289

1/153 Bertie Street, Port Melbourne Vic 3207 Tel: +61 3 9644 4888 Fax: +61 3 9644 4999 www.measurement.gov.au

National Measurement Institute

REPORT OF ANALYSIS

Page: 3 of 3
 Report No. RN727379

Lab Reg No.		V09/004951				
Sample Reference		1				
	Units					Method
Poly-unsaturated Triglycerides in Extracted Fat						
Total Mono Trans Fatty Acids	%	< 0.1				VL289
Total Poly Trans Fatty Acids	%	0.4				VL289
P:M:S Ratio		7.0:0.8:1.0				VL289

SK Nahar

Dr. Nahar Syeda, Analyst
 Food Composition - Vic

Neil Menz

Neil Menz, Analyst
 Food Composition - Vic

Sant Barone

Sant Barone, Chemist
 Organics - Vic

Paul Adorno

Paul Adorno, Section Manager
 Food Composition - Vic

17-MAR-2009

Results relate only to the sample(s) tested.
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Appendix 4: Certificate of Aminoacids



Australian Government - National Measurement Institute
 Report of Analysis - August 2007

Unit	100 grams		15 gram serve		
	Black	White	Black	White	
Trace Elements					
Calcium	mg/100g	510	500	76.5	75.0
Iron	mg/100g	6.4	6.0	1.0	0.9
Magnesium	mg/100g	290	290	43.5	43.5
Manganese	mg/100g	2.8	2.8	0.4	0.4
Phosphorus	mg/100g	600	620	90.0	93.0
Potassium	mg/100g	530	520	79.5	78.0
Sodium	mg/100g	<1.0	<1.0	<1.0	<1.0

Paul Adams
 Paul Adams, Section Manager
 Inorganics - Vic

Fatty Acid Profile					
Total Fat	g/100g	34.40	34.20	5.16	5.13
% total fat	%	100	100	100	100
Saturated Fats	g/100g	4.0	3.9	0.6	0.6
% of total fat	%	11.5	11.4	11.5	11.4
Mono-unsaturated Fats	g/100g	3.1	3.2	0.5	0.5
% of total fat	%	9.1	9.3	9.1	9.3
Poly-unsaturated Fats	g/100g	27.2	27.0	4.1	4.1
% of total fat	%	79.0	78.8	79.0	78.8
Omega 3 Fats	g/100g	19.8	19.5	3.0	2.9
- Alpha Linolenic Acid	%	57.7	56.9	57.7	56.9
Omega 6 Fats	g/100g	7.3	7.5	1.1	1.1
- Linolenic Acid	%	21.3	21.9	21.3	21.9
Trans Fats	g/100g	0.3	0.3	0.0	0.0
% of total fat	%	0.9	0.9	0.9	0.9

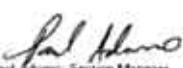



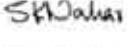
Sarah Bennett
 Sarah Bennett, Chemist
 Organics - Vic

Allergens					
Gluten Residue		Not detected	Not detected	Not detected	Not detected
Starch		Not detected	Not detected	Not detected	Not detected

Glenda Scott
 Glenda Scott, Analyst
 Microbiology - Vic



Australian Government - National Measurement Institute
 Report of Analysis - August 2007

	Unit	100 gram		15 gram serve	
		Black	White	Black	White
Proximates					
Moisture	g/100g	6.3	6.4	0.9	1.0
Protein	g/100g	20.4	20.8	3.1	3.1
Ash	g/100g	4.5	4.6	0.7	0.7
Carbohydrates	g/100g	<1	<1	<1	<1
Energy (kj)	kJ/100g	1930	1920	289.5	288
Total Sugars	g/100g	<1	<1	<1	<1
Dietary Fibre	g/100g	38.3	38.0	5.7	5.7
Insoluble Fibre	g/100g	33.0	30.9	5.0	4.6
Soluble Fibre	g/100g	5.3	7.1	0.8	1.1
Folate	ug/100g	90	70	13.5	10.5
Vitamins					
Retinol (Vitamin A)	ug/100g	<5	<5	<5	<5
Thiamin (Vitamin B1)	mg/100g	0.79	0.81	0.1	0.1
Riboflavin (Vitamin B2)	mg/100g	0.05	0.05	0.0	0.0
Niacin (Vitamin B3)	mg/100g	9.4	7.8	1.4	1.2
Cobalamin (Vitamin B12)	ng/100g	90	110	13.5	16.5
Absorbic Acid (Vitamin C)	mg/100g	1.8	1.3	0.3	0.2
Alpha-Tocopherol (Vitamin E)	mg/100g	0.23	0.28	0.0	0.0
Antioxidants ORAC Value (Vitamin E Equivalence)	umol/100g	10300	10200	1545	1530
Essential Amino Acids (Molecular weight minus H ₂ O)					
Isoleucine	mg/100g	623	722	93.5	108.3
Leucine	mg/100g	1117	1295	167.6	194.3
Lysine	mg/100g	791	903	118.7	135.5
Methionine	mg/100g	205	233	30.8	35.0
Phenylalanine	mg/100g	856	961	128.4	144.2
Threonine	mg/100g	592	698	88.8	104.7
Tryptophan	mg/100g	214	183	32.1	27.5
Valine	mg/100g	788	931	118.2	139.7
 Paul Adams, Section Manager Food Composition - Vic		 Neil Menz, Analyst Food Composition - Vic		 Tanya Casey Laboratory Services Unit - Vic	
 Norbert Strobel, Analyst Food Composition - Vic		 Dr. Nahar Syeda, Analyst Food Composition - Vic			

Appendix 5: Analytical data on heavy metals

The Ohio Company
 APL Lab No: 2230-2216
 26 February 2009

Metals

Date Prepared: 18/02/2009
 Date Analyzed: 19/02/2009, 25/02/2009

APL Lab No	Method
Sample Marks	Detection Limit
	mg/kg
Arsenic	0.1
Cadmium	0.1
Chromium	0.5
Copper	0.5
Mercury	0.05
Nickel	0.2
Lead	0.5
Zinc	0.5

2207	2202
09R0007	09R0007
mg/kg	mg/kg
< 0.1	< 0.1
< 0.1	< 0.1
< 0.5	< 0.5
22	21
< 0.02	< 0.02
1.8	2.9
< 0.5	< 0.5
81	59

2209
09R0007
mg/kg
< 0.1
< 0.1
< 0.5
19
< 0.02
1.8
< 0.5
27

The Chia Company
ARL Lab No: 7492
06 May 2009

Metals

Date Prepared 20/04/2009
Date Analysed 21/04/2009, 23/04/2009

ARL Lab No	Method	7492
Sample Marks	Detection Limit	09BD182
	mg/kg	mg/kg
Arsenic	0.1	< 0.1
Cadmium	0.1	< 0.1
Chromium	0.5	< 0.5
Copper	0.5	16
Mercury	0.02	< 0.02
Nickel	0.5	0.8
Lead	0.5	< 0.5
Zinc	0.5	38

The Clute Company
ARL Lab No: 9156-62
22 May 2009

Metals

Date Prepared 12/05/2009
Date Analyzed 13/05/2009, 19/05/2009

ARL Lab No	Method	9157
Sample Marks	Detection Limit	0000020
	mg/kg	mg/kg
Arsenic	0.1	< 0.1
Cadmium	0.1	< 0.1
Chromium	0.5	< 0.5
Copper	1.0	20
Mercury	0.01	< 0.01
Nickel	0.5	0.8
Lead	0.5	< 0.5
Zinc	0.5	67

Appendix 6: Analytical data on mycotoxins



ANALYSIS REPORT

The Chia Company
PO Box 105
628 - 630 Newcastle Street
Leederville Western Australia 6902

ATTENTION Natasha Jesske
FAX NUMBER 08 9228 1520
PURCHASE ORDER Rec: 21/9/09
PROJECT NUMBER J0909-0400

DATE RECEIVED 21 September 2009
OUR SAMPLE NUMBER S2009-14146
YOUR REFERENCE 09BD182
SAMPLE TYPE Seed

TEST	Result
Fumonisin (TP/)	
Fumonisin B1 (ppm)	<0.25
Fumonisin B2 (ppm)	<0.25
LCMS Mycotoxin Screen (TP/315)	
Aflatoxin B1 (ppm)	<0.0010
Aflatoxin B2 (ppm)	<0.0010
Aflatoxin G1 (ppm)	<0.0010
Aflatoxin G2 (ppm)	<0.0010
Deoxynivalenol (ppm)	<0.25
HT2 (ppm)	<0.1
Nivalenol (ppm)	<0.25
T2 (ppm)	<0.1
Zearalenone (ppm)	<0.025
Ochratoxin - HPLC (TP/295)	
Ochratoxin (ppb)	<1

Note: All samples are analysed on an as received basis.
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TP refers to the technical procedure used to conduct the analysis.

Final Report

Report Number: 26802

Report Number: 26802
Issued: 02 Oct 2009

Page 1 of 3



ANALYSIS REPORT

The Chia Company
PO Box 105
628 - 630 Newcastle Street
Leederville Western Australia 6902

ATTENTION	Natasha Jesske
FAX NUMBER	08 9228 1520
PURCHASE ORDER	Rec: 21/9/09
PROJECT NUMBER	J0909-0400

A handwritten signature in black ink, appearing to read 'Garrv Budden', is written over a light grey rectangular background.

Garrv Budden
Team Leader, Food Safety Laboratory

02 October 2009

Report Number: 26802
Issued: 02 Oct 2009

Page 2 of 3



ANALYSIS REPORT

The Chia Company
PO Box 105
628 - 630 Newcastle Street
Leederville Western Australia 6902

ATTENTION Natasha Jesske
FAX NUMBER 08 9228 1520
PURCHASE ORDER Rec: 21/9/09
PROJECT NUMBER J0909-0400

DATE RECEIVED 21 September 2009
OUR SAMPLE NUMBER S2009-14147
YOUR REFERENCE 09BD225
SAMPLE TYPE Seed

TEST	Result
Fumonisin (TP)	
Fumonisin B1 (ppm)	<0.25
Fumonisin B2 (ppm)	<0.25
LCMS Mycotoxin Screen (TP/315)	
Aflatoxin B1 (ppm)	<0.0010
Aflatoxin B2 (ppm)	<0.0010
Aflatoxin G1 (ppm)	<0.0010
Aflatoxin G2 (ppm)	<0.0010
Deoxynivalenol (ppm)	<0.25
HT2 (ppm)	<0.1
Nivalenol (ppm)	<0.25
T2 (ppm)	<0.1
Zearelenone (ppm)	<0.025
Ochratoxin - HPLC (TP/295)	
Ochratoxin (ppb)	<1

Note: All samples are analysed on an as received basis.
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TP refers to the technical procedure used to conduct the analysis.

Final Report

Report Number: 26802

A handwritten signature in black ink, appearing to read "Garrv Budden", is written over a light grey rectangular background.

Garrv Budden
Team Leader, Food Safety Laboratory

02 October 2009

Report Number: 26802
Issued: 02 Oct 2009

Page 3 of 3

Appendix 7: Analytical data on microbiological contaminants (I)

ProMicro Pty Ltd
ABN 47 009 120 549
PO Box 181, Hillarys
Western Australia 6923
31 Green Road, Hillarys

Ph: (+618) 9401 5699
Fax: (+618) 9401 5900
A/h: (+618) 9295 1767
Mobile: 0414 295 176
Email: admin@promicro.com.au



"Science with Ethics"

Attention: Natasha
The Chia Company
PO Box 105
LEEDERVILLE WA 6902

Certificate of Microbiological Analysis

Lab. No:	P0912990	Date Sample Taken:	4/06/2009
Sample Type:	Food	Date Received in Lab:	4/06/2009
Sample:	09BD022 White	Temp. when Received:	0

Test(s) Performed	Test Result(s)	ProMicro Manual
Yeasts	<200 CFU/g	PMM 2.9
Moulds	<200 CFU/g	PMM 2.9

Analyst: wh

AUTHORISED SIGNATORY:

DATE REPORTED :

10/06/2009

<= less than; >= greater than
^ = exponential



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Appendix 8: Analytical data on microbiological contaminants (II)

ProMicro Pty Ltd
 ABN 47 009 730 344
 PO Box 181, Hilliards
 Western Australia 6923
 31 Green Road, Hilliards

Ph: (+618) 9401 5699
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 A/h: (+618) 9296 0505
 Mobile: 0414 295 176
 Email: admin@promicro.com.au



Industrial & Environmental Microbiology

"Science with Ethics"

Attention: SAM
 The Chia Company
 Suite 6, Newcastle Mews
 628-630 Newcastle Street
 LEEDERVILLE WA 6007

Certificate of Microbiological Analysis

Lab. No:	P0903769	Date Sample Taken:	17/02/2009
Sample Type:	Food	Date Received in Lab:	17/02/2009
Sample:	09B022 Chia Seed	Temp. when Received:	0

Test(s) Performed	Test Result(s)	ProMicro Manual
Standard Plate Count	<400 CFU/g	PMM 2.1
Coliforms (CFU)	<20 CFU/g	PMM 2.2
E.Coli (CFU)	<20 CFU/g	PMM 2.3
Coagulase Positive Staphylococci	<200 CFU/g	PMM 2.4
Bacillus cereus	<200 CFU/g	PMM 2.5
Clostridium perfringens	<200 CFU/g	PMM 2.6
Salmonella species	Not Detected /25g	PMM 2.7
Listeria monocytogenes	Not Detected /25g	PMM 2.8

Analyst: wh

AUTHORISED SIGNATORY:

DATE REPORTED :

23/02/2009

<= less than; >= greater than
 * = exponential



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ProMicro Pty Ltd
 Abn 47 004 135 549
 PO Box 181, Hillarys
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 Email: admin@promicro.com.au



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Attention: SAM
 The Chia Company
 Suite 6, Newcastle Mews
 628-630 Newcastle Street
 LEEDERVILLE WA 6007

Certificate of Microbiological Analysis

Lab. No:	P0903770	Date Sample Taken:	17/02/2009
Sample Type:	Food	Date Received in Lab:	17/02/2009
Sample:	09B023 Chia Seed	Temp. when Received:	0

Test(s) Performed	Test Result(s)	ProMicro Manual
Standard Plate Count	<400 CFU/g	PMM 2.1
Coliforms (CFU)	<20 CFU/g	PMM 2.2
E.Coli (CFU)	<20 CFU/g	PMM 2.3
Coagulase Positive Staphylococci	<200 CFU/g	PMM 2.4
Bacillus cereus	<200 CFU/g	PMM 2.5
Clostridium perfringens	<200 CFU/g	PMM 2.6
Salmonella species	Not Detected /25g	PMM 2.7
Listeria monocytogenes	Not Detected /25g	PMM 2.8

Analyst: wh

AUTHORISED SIGNATORY:

DATE REPORTED :

23/02/2009

<= less than; >= greater than
 ^ = exponential



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ProMicro Pty Ltd
 ABN 47 009 120 549
 PO Box 181, Hillions
 Western Australia 6923
 31 Green Road, Hillions

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 A/fx: (+618) 9296 0505
 Mobile: 0414 295 176
 Email: admin@promicro.com.au



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Attention: SAM
 The Chia Company
 Suite 6, Newcastle Mews
 628-630 Newcastle Street
 LEEDERVILLE WA 6007

Certificate of Microbiological Analysis

Lab. No:	P0903773	Date Sample Taken:	17/02/2009
Sample Type:	Food	Date Received in Lab:	17/02/2009
Sample:	098057 Chia Seed	Temp. when Received:	0

Test(s) Performed	Test Result(s)	ProMicro Manual
Standard Plate Count	<200 CFU/g	PMM 2.1
Coliforms (CFU)	<20 CFU/g	PMM 2.2
E.Coli (CFU)	<20 CFU/g	PMM 2.3
Coagulase Positive Staphylococci	<200 CFU/g	PMM 2.4
Bacillus cereus	<200 CFU/g	PMM 2.5
Clostridium perfringens	<200 CFU/g	PMM 2.6
Salmonella species	Not Detected /25g	PMM 2.7
Listeria monocytogenes	Not Detected /25g	PMM 2.8

Analyst: wh

AUTHORISED SIGNATORY:

DATE REPORTED :

23/02/2009

<= less than; >= greater than
 ^ = exponential



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Pro Pty Ltd
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 Box 181, Hillarys
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"Science with Ethics"

Attention: Natasha
 The Chia Company
 PO Box 105
 LEEDERVILLE WA 6902

Certificate of Microbiological Analysis

Lab. No:	P0908952	Date Sample Taken:	20/04/2009
Sample Type:	Food	Date Received in Lab:	20/04/2009
Sample:	09B182	Temp. when Received:	0

Test(s) Performed	Test Result(s)	ProMicro Manual
Standard Plate Count	3,200 CFU/g	PMM 2.1
Coliforms (CFU)	60 CFU/g	PMM 2.2
E.Coli (CFU)	<20 CFU/g	PMM 2.3
Coagulase Positive Staphylococci	<200 CFU/g	PMM 2.4
Bacillus cereus	<200 CFU/g	PMM 2.5
Clostridium perfringens	<200 CFU/g	PMM 2.6
Salmonella species	Not Detected /25g	PMM 2.7
Listeria monocytogenes	Not Detected /25g	PMM 2.8

Analyst: wh

AUTHORISED SIGNATORY:

DATE REPORTED :

28/04/2009

<= less than; >= greater than
 * = exponential



NATA Accredited Laboratory Number: 2581

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The data pertains solely to the analytical and sampling procedures used and the condition and homogeneity of the samples as received. The data therefore may not be representative of the lot or other samples. Consequently the data may not necessarily justify the acceptance or rejection of a lot or batch, a product recall or support legal proceedings. Tests are routinely performed as duplicates unless specifically requested. It is the responsibility of the client to provide all information relevant to analysis requested. Changes occur in the bacterial content of biological samples. Samples should be examined as soon as possible after collection, preferably within 6 hrs and must be stored at 4 degrees Celsius or below. Samples tested after 24 hrs cannot be regarded as satisfactory because of temperature abuse and variations (eg. stressed).

ProMicro Pty Ltd
 Hwy 27 908 120 544
 PO Box 131, Hillarys
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Industrial & Environmental Microbiology

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Attention: Natasha
 The Chia Company
 PO Box 105
 LEEDERVILLE WA 6902

Certificate of Microbiological Analysis

Lab. No:	P0910716	Date Sample Taken:	12/05/2009
Sample Type:	Food	Date Received in Lab:	12/05/2009
Sample:	09BD226	Temp. when Received:	0

Test(s) Performed	Test Result(s)	ProMicro Manual
Standard Plate Count	<400 CFU/g	PMM 2.1
Coliforms (CFU)	<20 CFU/g	PMM 2.2
E. Coli (CFU)	<10 CFU/g	PMM 2.3
Coagulase Positive Staphylococci	<200 CFU/g	PMM 2.4
Bacillus cereus	<200 CFU/g	PMM 2.5
Clostridium perfringens	<200 CFU/g	PMM 2.6
Salmonella species	Not Detected /25g	PMM 2.7
Listeria monocytogenes	Not Detected /25g	PMM 2.8

Analyst: dc

AUTHORISED SIGNATORY:

DATE REPORTED :

18/05/2009

<= less than, >= greater than
 * = exponential



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"Science with Ethics"

Attention: Natasha
 The Chia Company
 PO Box 105
 LEEDERVILLE WA 6902

Certificate of Microbiological Analysis

Lab. No:	P0911153	Date Sample Taken:	14/05/2009
Sample Type:	Food	Date Received in Lab:	14/05/2009
Sample:	07BD147	Temp. when Received:	0

Test(s) Performed	Test Result(s)	ProMicro Manual
Standard Plate Count	120 CFU/g	PMM 2.1
Coliforms (CFU)	<10 CFU/g	PMM 2.2
E. Coli (CFU)	<10 CFU/g	PMM 2.3
Coagulase Positive Staphylococci	<100 CFU/g	PMM 2.4
Bacillus cereus	<100 CFU/g	PMM 2.5
Clostridium perfringens	<100 CFU/g	PMM 2.6
Salmonella species	Not Detected /25g	PMM 2.7

Analyst: dc

AUTHORISED SIGNATORY:

DATE REPORTED :

18/05/2009

<= less than; >= greater than
 * = exponential



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Attention: Natasha
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Certificate of Microbiological Analysis

Lab. No:	P0911154	Date Sample Taken:	14/05/2009
Sample Type:	Food	Date Received in Lab:	14/05/2009
Sample:	07BD158	Temp. when Received:	0

Test(s) Performed	Test Result(s)	ProMicro Manual
Standard Plate Count	540 CFU/g	PMM 2.1
Coliforms (CFU)	<10 CFU/g	PMM 2.2
E.Coli (CFU)	<10 CFU/g	PMM 2.3
Coagulase Positive Staphylococci	<100 CFU/g	PMM 2.4
Bacillus cereus	<100 CFU/g	PMM 2.5
Clostridium perfringens	<100 CFU/g	PMM 2.6
Salmonella species	Not Detected /25g	PMM 2.7

Analyst: dc

AUTHORISED SIGNATORY:

DATE REPORTED :

18/05/2009

<= less than; >= greater than
 ^ = exponential

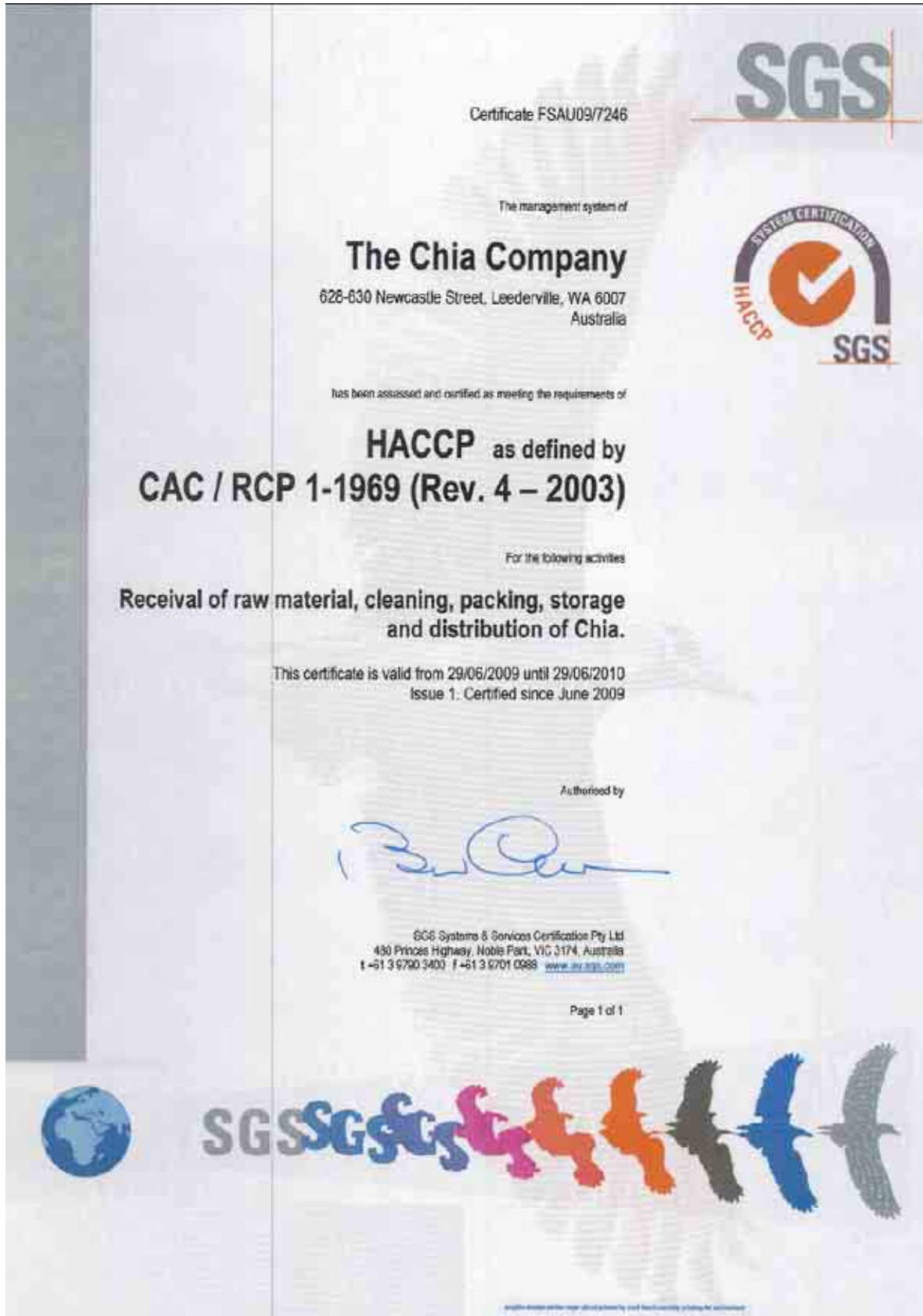


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Appendix 9: Certificate of compliance with HACCP system



11. REFERENCES

- ACNFP (Advisory Committee for Novel Foods and Processes), 2004. Opinion on an application under the Novel Foods Regulation for Chia (*Salvia hispanica* L.). Food Standards Agency. London.
- AYERZA R and COATES W (1999). An omega-3 fatty acid enriched Chia diet: influence on egg fatty acid composition, cholesterol and oil content. *Can. J. of Anim. Sc.* 79: 53-58.
- AYERZA R and COATES W (2000). Dietary levels of Chia: influence on yolk cholesterol, lipid content and fatty acid composition for two strains of hens. *Poult. Sci.* 79: 724-739.
- AYERZA R and COATES W (2002). Dietary levels of Chia: influence on hen weight, egg production and sensory quality, for two strains of hens. *Br. Poult. Sci.* 43: 283-290.
- AYERZA R, COATES W, LAURIA M (2002). Chia seed (*Salvia hispanica* L.) as an omega-3 fatty acid source for broilers: influence on fatty acid composition, cholesterol and fat content of white and dark meats, growth performance, and sensory characteristics. *Poult. Sci.* 81: 826- 837.
- AYERZA R and COATES W (2005). Ground Chia seed and Chia oil effects on plasma lipids and fatty acids in rats. *Nutrition Research.* 25:995-1003.
- AYERZA R and W COATES (2006). Influence of Chia on total fat, cholesterol, and fatty acid profile of Holstein cow's milk. *Revista Científica de la Universidad de Ciencias Empresariales y Sociales*, Vol. X - No. 2 - Primavera 2006:40-49.
- BENITO M, JORRO G, MORALES C, PELAEZ A, FERNANDEZ A (1996). Labiatae allergy: systemic reactions due to ingestion of oregano and thyme. *Ann. Allergy Asthma Immunol.* 76: 416-418.
- Commission Directive 2002/27/EC amending Directive 1998/53/EC laying down the sampling methods and the methods of analysis for the official control of the levels for certain contaminants in foodstuffs. *Off. J. Eur. Communities*, 16.3.02, L 75/44.
- Commission Directive 2002/26/EC laying down the sampling methods and the methods of analysis for the official control of the levels of ochratoxin A in foodstuffs. *Off. J. Eur. Communities*, 16.3.02, L 75/38.
- Commission Regulation 466/2001/EC setting maximum levels for certain contaminants in foodstuffs. *Off. J. Eur. Communities*, 16.03.2001, L 77/1.
- EFSA, 2005. Opinion of the Scientific Panel on Dietetic Products, Nutrition and Allergies on a request from the Commission related to the safety of Chia (*Salvia hispanica* L.) seed and ground whole Chia seed as a novel food ingredient intended for use in bread (Request N° EFSA-Q-2005-059) (adopted on 5 October 2005). *The EFSA Journal* 278: 1-12.
- EFSA, 2009. Scientific Opinion of the Panel on Dietetic Products Nutrition and Allergies on a request from the European Commission on the safety of Chia seed (*Salvia hispanica*) and ground whole Chia seed (The EFSA Journal (2009) 996, 15-26).
- FERNANDEZ I and al., 2008. FERNANDEZ I, VIDUEIROS SM, AYERZA R, COATES W and PALLARO A. Impact of Chia (*Salvia Hispanica*, L.) on the immune system: preliminary study. *Proceedings of the Nutrition Society*, Volume 67, Issu OCE, May 2008, E12.

- HENDERSON L, GREGORY J, SWAN G, 2002. The National Diet and Nutrition Survey: adults aged 19 to 64 years. Types and quantities of foods consumed. *Her Majesty's Stationery Office*. ISBN: 0116215666. London. England.
- SCF (Scientific Committee for Food), 1997. Recommendations concerning the scientific aspects of information necessary to support applications for placing on the market of novel foods and novel food ingredients.
http://ec.europa.eu/food/fs/sc/scf/reports/scf_reports_39.pdf