



**MARKET ACCESS SECRETARIAT
Global Analysis Report**

Health and Wellness Series

Chlorella

In Packaged Food, Beverage, and Pet Products

August 2016



EXECUTIVE SUMMARY

Globally, there were 353 products containing chlorella launched between February 2013 and April 2016: 181 in the food category; 91 in the drink category, and 81 in the pet products category.

Chlorella is high in protein and other essential nutrients, such as antioxidants, chlorophyll, vitamins, minerals and fibre.

With 73 products, Japan launched the largest number new food products containing chlorella during the review period (February 2013 to April 2016). It also launched the most pet products containing chlorella (77).

With 57 products, the US launched the largest amount of new products in the drink category from February 2013 to April 2016.

While the most common claims used for products containing chlorella in the food and drink categories fall under “Natural” (i.e. GMO-free, Organic, No Additives, etc.) and “Suitable For” (i.e. low/no/reduced allergens, gluten-free, no animal ingredients, etc.), the most popular claims used for pet products were related to healthy digestion and urinary tracts, skin/coat, and immune system.

Most of the new products in the food and drink categories were introduced by a diverse source of companies, indicating supplier fragmentation. Overall, Nisshin Pet Food (Japan) was the company that launched the most new products containing chlorella, with 73 new products from February 2013 to April 2016.

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NEW PRODUCTS CONTAINING CHLORELLA

From February 2013 to April 2016, there were 353 new products launched globally that contained chlorella. Japan saw the most new product launches, with a total of 151. Most of the country's products were in the following subcategories: pet food, bakery, and desserts/ice cream.

With the majority of its products in the juices, other beverages, and snacks subcategories, the United States had the second largest amount of new products containing chlorella. 58 products containing chlorella were introduced in South Korea, most of which were in the sauces and seasonings, bakery products, and baby food subcategories. Canada had a total of 13 new products with chlorella, with majority being beverages and snacks. Germany ranked fifth in product launches, with seven products, including 3 juice drinks, 1 carbonated soft drink, 1 hot beverage, 1 chocolate confectionery, and 1 snack.

New Products with Chlorella by Top Five Markets and Category, from February 2013 to April 2016

Country	Product Category	Number of Products
Total Products		353
Japan - 151	Pet Food	77
	Food	73
	Drink	1
United States - 76	Drink	57
	Food	19
South Korea - 58	Food	54
	Pet Food	3
	Drink	1
Canada - 13	Drink	8
	Food	5
Germany - 7	Drink	5
	Food	2
Other Countries - 48	Food	28
	Drink	19
	Pet Food	1

Source: Mintel, 2016.

A total of 328 new packaged food, drink and pet food products were launched over the past three years. The market for products containing chlorella has been increasing, reaching 128 products in 2015. Although there was a decrease from 73 product launches in 2013 to 41 in 2015, Japan saw the most product launches with a total of 145 products from January 2013 to December 2015. The United States was the second-ranked market, with 70 new products launched during the three-year period.

New Packaged Food, Beverage and Pet Products with Chlorella by Top 5 Markets, from January 2013 to December 2015

Country	2013	2014	2015	Total
Japan	31	73	41	145
United States	28	13	29	70
South Korea	13	17	22	52
Canada	1	1	10	12
Germany	2	1	4	7
Other Countries	12	8	22	42
Total	87	113	128	328

Source: Mintel, 2016.



From February 2013 to April 2016, the four main subcategories included Pet Food, Bakery Products, Juice Drinks, and Snacks.

- Within Pet Food, 69 products were dry dog food, 5 were dry cat food, 4 were cat snacks and treats, and 2 were dog snacks and treats.
- Within the Bakery subcategory, 32 were cakes/pastries/sweet goods, 24 were sweet biscuits/cookies, 2 were bread/bread products, and 1 was savoury biscuits/crackers.
- Within the Juice Drinks subcategory, 36 were juices, 11 were nectars, and 6 were fruit/flavoured still drinks.
- Within Snacks, 23 were snack/cereal/energy bars, 5 were corn-based snacks, 1 was a fruit snack, 1 was nuts, 1 was a potato snack, 1 was a rice snack, and 1 was a grain-based snack.

**New Packaged Food, Beverage, and Pet Products with Chlorella in the World
By Subcategories, From February 2013 to April 2016**

Product Subcategory	Number of Products
Pet Food	80
Bakery	59
Juice Drinks	53
Snacks	33
Other Beverages	31
Deserts & Ice Cream	26
Sauces & Seasonings	16
Meals & Meal Centres	12
Baby Food	11
Dairy	8
Side Dishes	5
Chocolate Confectionery	3
Soup	3
Sports & Energy Drinks	3
Carbonated Soft Drinks	2
Fruit & Vegetables	2
Hot Beverages	1
RTDs	1
Sugar & Gum Confectionery	1
Sweet Spreads	1

Source: Mintel, 2016.

TOP COMPANIES

Nisshin Pet Food had the most launches of new products containing chlorella, with 73 new products.

Tohato launched 21 new food products containing chlorella during the review period, 16 of which were sweet biscuits/cookies, 4 of which were corn-based snacks, and 1 was a potato snack.

The US based company, Suja Life, launched 6 new juice products containing chlorella, 3 nectars, and 2 fruit/flavoured still drinks.



South Korea's Emart launched 6 sauces and seasonings, 2 sweet biscuits/cookies, 1 cake/pastry, and 1 prepared meal containing chlorella.

The Canadian company, InovoBiologic, focused on meal replacement drinks, launching 3 new products containing chlorella from February 2013 to April 2016.

Whollees in Germany launched 2 new juice drinks containing chlorella, both with ethical and organic claims.

New Products Containing Chlorella, by Major Companies in Top Five Markets, from February 2013 to April 2016

Country	Company	Number of Products
Japan	Nisshin Pet Food	73
	Tohato	21
	Plecia	11
	Domremy	6
	Circle K Sunkus	4
United States	Suja Life	11
	Sequel Naturals	6
	Orange Peel Enterprises	5
	Amazing Grass	4
	Garden of Life	4
South Korea	Emart	10
	Daesang	7
	Dongwon Home Food	7
	Paris Croissant	5
	Namyang Dairy Products	4
Canada	InovoBiologic	3
	Quantum Nutrition	3
	Genuine Health	1
	Grimmway Farms	1
	Happy Planet Foods	1
Germany	Whollees	2
	Evasis Edibles	1
	Mamma Chia	1
	NORMA	1
	True Fruits	1

Source: Mintel, 2016.



HEALTH CLAIMS

Of the products including a GMO-free claim, 44 belong to the drink category, 25 to pet products, and 21 to food. The US launched the most products with GMO-free claims (46), followed by Japan (29).

Most products containing chlorella with “low/no/reduced allergen” claims were in the drink category (60), followed by 28 in food, and 2 in pet products.

Most organic products containing chlorella were in the drink (49) and food (32) categories, with 2 in pet products. The US launched the most organic products containing chlorella during the review period, with 56.

New Packaged Food, Beverage and Pet Products with Chlorella by Top 20 Claims, from February 2013 to April 2016

Claims	Number of Products
GMO-Free	90
Low/No/Reduced Allergen	90
Organic	83
No Additives/Preservatives	81
Gluten-Free	77
Digestion & Urinary Tract (Pet Food)	70
Skin & Coat (Pet Food)	70
No Animal Ingredients	64
Vegan	64
Immune System (Pet Food)	62
Joints, Bones & Muscles (Pet Food)	61
Functional	45
Kosher	42
Low/No/Reduced Sugar	42
Senior (Pet Food)	38
Teeth & Tartar Prevention (Pet Food)	35
Wholegrain	32
Other Functional (Pet Food)	30
Antioxidant	24
Adults (Pet Food)	24

Source: Mintel, 2016.



NEW PRODUCT EXAMPLES

Bread Buns

Company: Productos Dulcesol

Brand: Dulcesol Innova

Category: Bakery

Sub-Category: Bread & Bread Products

Country: Spain

Launch Type: New Variety/Range Extension

Price in US Dollars: 1.09

Claims: High/Added Fiber, Cardiovascular (Functional), Bone Health, Weight & Muscle Gain, Low/No/Reduced Saturated Fat, Social Media

Product Description: Dulcesol Innova Panecillos con Semillas de Chía, Chlorella y Aceite de Oliva Virgen Extra (Bread Buns with Seaweed, Chia Seeds, Chlorella and Extra Virgin Olive Oil) are high in fibre and low in saturated fat. They are a rich source of vegetable protein, which increases the muscular mass and helps maintain bones healthy, and omega 3 fatty acids. The product also contains chlorella and unicellular seaweed, which are very rich in natural pigments including chlorophyll and beta-carotene. They contain vitamins A, B2, B3, B5, B6, B12, C and E and their alpha-linoleic acid content contributes to maintaining normal levels of blood cholesterol. The product retails in a 215g pack.



Protein Superfood Nutrition Shake

Company: Amazing Grass

Brand: AmaZing Grass

Category: Other Beverages

Sub-Category: Meal Replacements & Other Drinks

Country: USA

Launch Type: New Product

Price in US Dollars: 34.99

Claims: Other (Functional), Kosher, Gluten-Free, Low/No/Reduced Sugar, Organic, Digestive (Functional), Low/No/Reduced Allergen, Vegan, Ease of Use, No Animal Ingredients, GMO-Free, Weight & Muscle Gain

Product Description: Protein Superfood Nutrition Shake combines alkalizing farm fresh greens with nutrient-dense fruits and veggies plus 20g of plant-based protein. This shake is claimed to promote lean muscle, satisfy hunger, provide nourishing energy and aid in digestion. It is suitable for vegans, contains all natural flavour, provides seven alkalizing greens and two servings of fruits and veggies. The convenient product retails in a 15.1-oz. pack.





Mineral Greens Turmeric Beverage Elixir

Company: Temple Turmeric

Brand: Temple Turmeric

Category: Juice Drinks

Sub-Category: Fruit/Flavoured Still Drinks

Country: USA

Launch Type: Relaunch

Price in US Dollars: 5.99

Claims: Kosher, Organic, Gluten-Free, GMO-Free, Low/No/Reduced Allergen, Ethical

Product Description: Mineral Greens Turmeric Beverage Elixir features a blend of Hawaiian Oana Turmeric with adaptogenic ingredients for maximized absorption, is formulated with 5% juice, and contains spirulina, chlorella, barley grass, ginger, cardamom, spearmint, cinnamon, cayenne, coconut nectar, lemon and sea salt. The organic drink retails in a 12-fl. oz. BPA-free bottle. The manufacturer claims to ethically source its proprietary Hawaiian oana turmeric from small family farms and offers 100% traceability to its nutrient enriched volcanic soils.



Organic Sweet Potato Cubes

Company: EreBon

Brand: Organic Pet Food Bio

Category: Pet Food

Sub-Category: Dog Snacks & Treats

Country: South Korea

Launch Type: New Product

Price in US Dollars: 2.84

Claims: High/Added Fiber, Organic, Immune System (Functional Pet)

Product Description: Organic Pet Food Bio Organic Sweet Potato Cubes with Chlorella are now available. The product is rich in dietary fibre and vitamins, contains beta-carotene to enhance the pet's immune system, and retails in a 60g pack bearing the USDA Organic and EcoCert logos.





MARKET SIZE – PACKAGED FOOD, BEVERAGE, AND HEALTH AND WELLNESS PRODUCTS FOR SELECT COUNTRIES AND CATEGORIES

Of the five markets that had the most new product launches containing chlorella from February 2013 to April 2016, the United States had the largest market for health and wellness soft drinks (not necessarily containing chlorella) in 2015, and this trend is expected to continue through to 2020. Although South Korea is not the largest market for health and wellness soft drinks, it has been the fastest growing market with a compound annual growth rate of 8.2% from 2010 to 2015. The United States was also the largest market for baked goods (not necessarily containing chlorella) in 2015, with a value of US\$56.1 billion.

Market Size, Retail Value Sales in US\$ Millions
Packaged Food, Beverage, and Health and Wellness Products for Select Countries and Categories

Country	Category	2010	2015	2016	2020	2010-15 *CAGR	2016-20 *CAGR
Japan	Health and Wellness Soft Drinks	25,836.0	26,306.2	26,349.2	26,437.3	0.4	0.1
	Baked Goods	18,739.4	18,512.9	18,549.7	18,695.0	2.8	0.2
	Sauces, Dressings and Condiments	17,272.9	16,501.6	16,588.1	16,986.4	3.7	0.6
South Korea	Health and Wellness Soft Drinks	1,595.6	2,371.6	2,497.2	2,718.2	8.2	2.1
	Baked Goods	1,505.3	1,765.8	1,747.3	1,707.3	3.2	-0.6
	Ice Cream and Frozen Desserts	1,941.6	1,754.6	1,711.2	1,533.3	-2.0	-2.7
Canada	Baked Goods	4,982.8	5,784.2	5,906.9	6,350.0	3.0	1.8
	Health and Wellness Soft Drinks	5,125.3	5,390.5	5,416.9	5,631.7	1.0	1.0
	Sauces, Dressings and Condiments	2,231.8	2,536.8	2,579.9	2,741.8	2.6	1.5
USA	Baked Goods	49,799.5	56,051.0	56,575.0	58,675.2	2.4	0.9
	Health and Wellness Soft Drinks	49,584.7	55,201.4	55,991.2	60,875.7	2.2	2.1
	Biscuits and Snack Bars	19,612.0	22,366.8	22,499.6	23,285.7	2.7	0.9
Germany	Baked Goods	15,258.8	16,460.9	16,545.3	16,696.1	1.5	0.2
	Health and Wellness Soft Drinks	8,233.3	9,221.6	9,279.2	9,447.0	2.3	0.4
	Sauces, Dressings and Condiments	3,586.1	3,945.0	3,967.2	4,022.7	1.9	0.3

Source: Euromonitor International, 2016.

***CAGR:** compound annual growth rate

Note: This market size shows only selected countries and product categories for packaged food, beverage, and health and wellness products with a significant number of new product launches containing chlorella.

CONCLUSION

As the global trend for healthy and convenient food products continues, there is an opportunity for chlorella to be used in products with “natural” health claims, such as GMO-free, organic, and no additives.

There is also an opportunity for chlorella to be used in pet products, particularly in Japan where Nisshin Pet Food launched the most new pet products containing chlorella from February 2013 to April 2016, with 73 new products.



FOR MORE INFORMATION

International Trade Commissioners can provide Canadian industry with on-the-ground expertise regarding market potential, current conditions and local business contacts, and are an excellent point of contact for export advice.

- **Find a Trade Commissioner**
www.tradecommissioner.gc.ca/eng/find-trade-contacts.jsp

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- ats-sea.agr.gc.ca

RESOURCES

Euromonitor International Database, 2016.

Mintel Global New Products Database, 2016.



CHLORELLA IN PACKAGED FOOD, BEVERAGE, AND PET PRODUCTS

Global Analysis Report

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