



Seagreens®

25 years in Seaweed Nutrition

For professional and consumer use



Daily use

The Seagreens project began harvesting seaweed specifically for human nutrition 25 years ago.

Innovative research and production in the British Isles and Nordic region, has made Seagreens® a leading authority on the composition and health benefits of our native wild species.

Seagreens® nutrition products respond to worldwide micronutrient deficiencies and degenerative diseases of mind and body.

Only very small amounts are required, *but every day*, since their most valuable nutrients are not made in the body and must come from our diet.

This has been the traditional use of seaweed in places like Japan, where it is still ubiquitous in food. But for our western eating habits, Seagreens® is ideal.

Up to a teaspoon can be added to any kind of everyday meal, food or drink, or use daily capsules. Our delicious condiments can reduce your daily intake of salt by up to 75%.

Re-balancing food

The past half century has seen a serious imbalancing of nutrients in our food, not only due to intensive farming, but because so much food is now 'manufactured' with no natural composition.

UK government data show that meat and vegetables lost almost half their calcium, iron, magnesium, copper and zinc (1). On average we eat a third less vegetables, so important for vitamins, and less than half the fish, a valuable source of Omega fatty acids (2).

Even a variety of land and sea foods leaves gaps which are hard to fill on a daily basis.

Yet Seagreens® contain not just the broadest range of nutrients of any natural food - all the minerals and trace elements, vitamins, essential fatty acids, polyphenols and antioxidants - but distinctively 'seaweed' nutrients like polysaccharides, soluble fibre and iodine.

Seaweed underpins a balanced daily diet, replaces the missing micronutrients, and helps your body to get on with its job. It *feeds the foundation of health.*



A teaspoon is a lot

Unlike proteins, carbohydrates, and fats which *fuel* our daily activities, micronutrients are the tiny catalysts for thousands of daily processes to defend, detox, digest, grow, repair, and above all, *balance* our diet!

It's more important to have 'a little of them all' than to have a lot of any micronutrient. Micronutrient gaps mean things don't get done, are delayed, or lead to degeneration. But in many cases, larger amounts become toxic.

For everyday sufficiency, use Seagreens® nutrition products as it says on the jars. A gram a day, a quarter of a teaspoon of granules or a couple of capsules, or 2 teaspoons of our larger pieces, is enough.

In nutritional therapy, up to a teaspoon or more of the granules or equivalent capsules, or several teaspoons of larger pieces, might be used for shorter periods.

The products are meant to mix and match, since each of the seaweeds, though similar in overall composition, is particularly rich in essential fatty acids, polyphenols, or certain minerals.

Seaweed was just over a teaspoon in Japan's traditional daily diet, but they have been eating it for hundreds of years. Elsewhere, a teaspoon is a lot.



**Nutritious
Food Seaweed**
BDA CERTIFICATION

Provenance

Sustainable wild harvesting in remote locations in the British Isles and Nordic region. Non-allergenic, organic, vegan, kosher, halal, raw. Independently certified to NFS and BRC international standards. Nothing added or extracted. Recyclable or biodegradable packaging. Safe for all ages, special diets and health conditions. 15 years' unique compositional data and nutrition research. www.seagreens.co.uk/nutrition

Know your seaweed

You can see why it's vital to know the composition of the seaweed you eat. And like other ocean species, they can absorb harmful contaminants.

Seagreens® harvests only a small part of each wild seaweed plant, from documented beds which are continuously monitored.

We also monitor composition, which has enabled us to achieve steadily higher levels of nutrients, free from pollutants and harmful allergens.

Our seaweed is traceable to its exact harvesting location, ensuring proper re-growth, which like pruning roses, improves the native stock. Even at many times current volumes, Seagreens® production will always be sustainable.

Our production data is the world's most comprehensive on our native species and transparent to our customers, so *you know what you are eating and healthcare professionals can be confident of expected outcomes.*

Know why it works

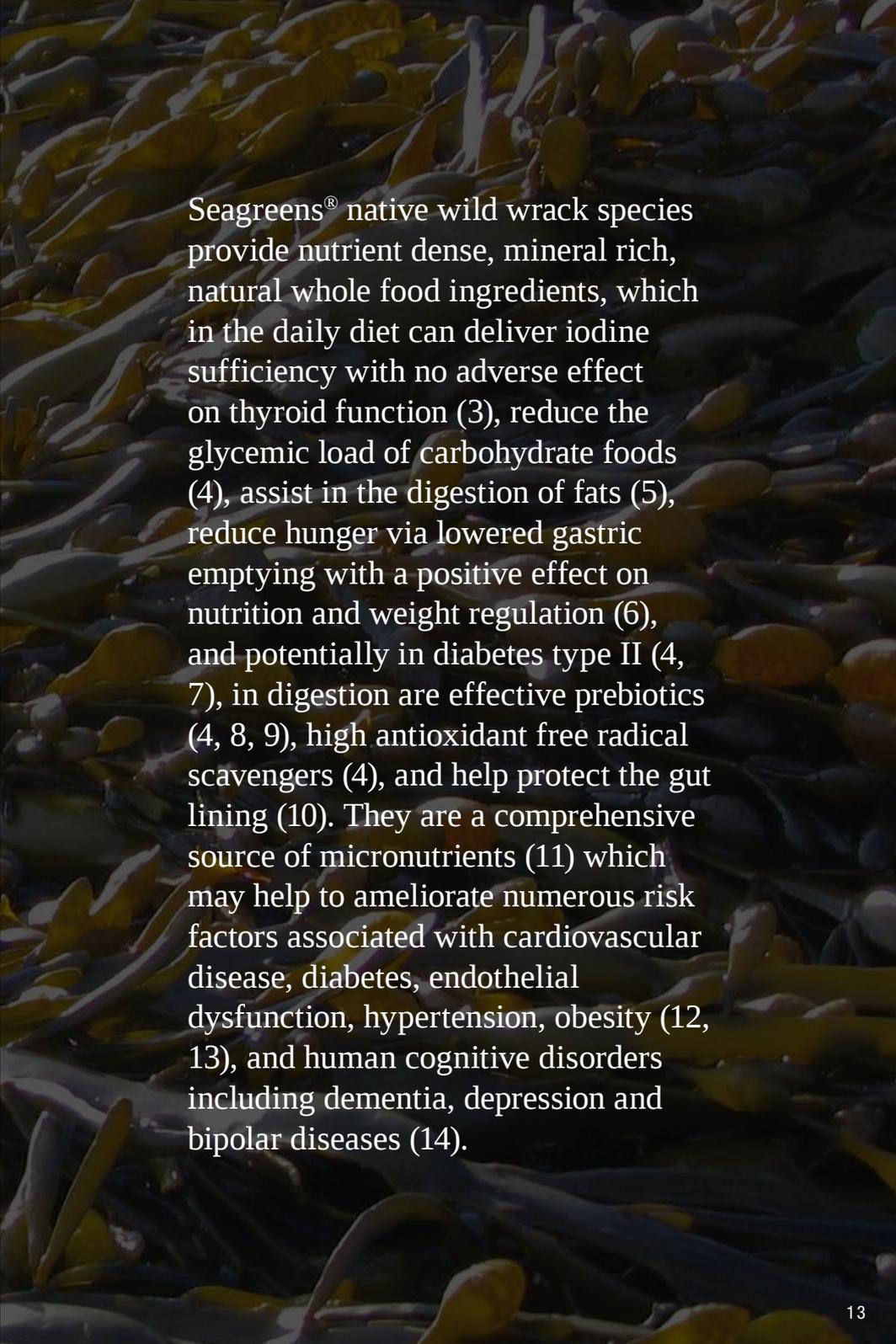
Since 2008, Seagreens® has pursued a programme of nutrition research not only to provide the full range of micronutrients, but to address population health concerns like obesity, diabetes, cancer, cardiovascular disease and dementia.

Our applied research, using our whole food seaweeds, has differed from conventional studies using only ‘extracts’ isolated from seaweeds, and very often from seaweeds which consumers are unlikely to be able to eat.

Over the years we have set up harvesting operations in remote coastal locations in Norway, Scotland, Ireland and Iceland, where to date we have selected, researched and produced 5 native wild species – *Alaria*, *Ascophyllum*, *Fucus*, *Palmaria*, and *Pelvetia*.

For those who want to know more, our information website offers a wealth of scientific data. And in local communities we seek to strengthen relations between knowledgeable healthcare practitioners, our retail partners, and consumers.





Seagreens® native wild wrack species provide nutrient dense, mineral rich, natural whole food ingredients, which in the daily diet can deliver iodine sufficiency with no adverse effect on thyroid function (3), reduce the glycemic load of carbohydrate foods (4), assist in the digestion of fats (5), reduce hunger via lowered gastric emptying with a positive effect on nutrition and weight regulation (6), and potentially in diabetes type II (4, 7), in digestion are effective prebiotics (4, 8, 9), high antioxidant free radical scavengers (4), and help protect the gut lining (10). They are a comprehensive source of micronutrients (11) which may help to ameliorate numerous risk factors associated with cardiovascular disease, diabetes, endothelial dysfunction, hypertension, obesity (12, 13), and human cognitive disorders including dementia, depression and bipolar diseases (14).

Choosing Seagreens®

It matters less which Seagreens® products you choose.

It's more a question of how you want to use them.

All deliver Seagreens® valuable micronutrients and health benefits.

They all contain iodine.

Mix and match and use them every day.





Food Capsules & Food Granules

Seagreens® unique, classic blends of native wild seaweeds (see jar labels) have been widely used for over 25 years. Both these products provide all of Seagreens® nutritional benefits.

Food Capsules are for daily convenience and a measured intake. Our Trufil® vegcaps contain pure seaweed, *nothing else*. 2 capsules each morning or higher levels with nutrition advice in supplementation and therapy. Suitable for safe, permanent use as a daily dietary foundation.

Food Granules are the microfine soluble version without capsules. Better for tonics, teas and smoothies, and as a food sprinkle, useful for children and the elderly. Very hot water will reduce iodine. Use at least 1g or 1/2 a level teaspoon daily.



Iodine+ Capsules (adults) & Iodine Lite+ (children)



For sufficiency in iodine, *whenever there is a known deficiency*. A single capsule each morning. For long term use beyond six months, switch to Food Capsules or Food Granules for broader nutrient balance including iodine. The table overleaf provides comparative data.

Seagreens® seaweeds contain rarer vitamins such as B9 and B12, minerals such as magnesium, selenium and zinc, and all the nutrients the body needs from everyday foods to properly metabolise iodine. This is why these products are called Iodine 'Plus'.

Iodine Lite+ is best for children, and adults who merely wish to 'top up' against iodine deficiency. It is a blend of seaweed species with lower iodine and can safely be used on a permanent basis into adolescence. Iodine beyond the body's requirement is readily excreted.

Some 33% of the iodine content stated on our jars can be expected as the actual uptake in the body. Iodine is in any case a volatile water-soluble mineral, and in digestion is slowly released from the food matrix in the seaweed where it is un-bound from protein ion carriers.



In our ground-breaking research on thyroid iodine, published in the British Journal of Nutrition 2014, Seagreens® “improved iodine intake by 60% with no adverse effect on thyroid function, normalised production of TSH (thyroid simulating hormone), the iodine modestly available at 33%, with stable, prolonged release of the iodine. Would not exceed recommended daily intake even if consumed by those with sufficient iodine” (3).

This was in stark contrast to the significantly less stable behaviour of potassium iodide, a chemically formulated iodine supplement commonly used in salt and many foods, compared in the same study.

Prolonged use of Seagreens® does not interfere with the drug thyroxine (or levothyroxine), commonly prescribed for under-active thyroid (hypothyroidism). It is a complete natural source of dietary micro-nutrients and minerals including iodine, which ‘feeds’ the thyroid, unlike the drug which replaces the body’s production of thyroxine (T4). Thyroxine might be prescribed in combination with Seagreens® *if the thyroid still needs support.*

For more about iodine and its benefits please request our booklet *Iodine sufficiency from nutritious food seaweed* available by email or in printed form by post.

Iodine levels in Seagreens® nutrition products per gram

Uptake of iodine in the body has been shown to be approximately 1/3rd of intake*. Figures are average iodine levels in micrograms over two decades harvesting Seagreens®. Iodine levels fluctuate according to natural variances in species and individual uptake.

Product name	Intake (daily use or portion)	*Uptake
Food Capsules x 2 (1g / 0.04oz)	390µg	129µg
Food Granules x 1/4 tsp (1g / 0.04oz)	390µg	129µg
Iodine+ Capsules x 1 (half a gram / 0.02oz)	640µg	211µg
Iodine Lite+ Capsules x 1 (400mg / 0.014oz)	375µg	124µg
Culinary Ingredient (half a gram / 0.02oz)	870µg	287µg
The Mineral Salt (1g / 0.04oz)	435µg	144µg
The Ruby One (1g / 0.04oz)	353µg	117µg
Pelvetia Pieces (2g / 0.07oz)	274µg	90µg
Pet & Equine Granules (1g / 0.04oz)	870µg	287µg

*Iodine contributes to the normal production of thyroid hormones, normal thyroid function, nervous system and cognitive function, the normal growth of children, normal energy-yielding metabolism, and the maintenance of normal skin.



Culinary Ingredient

This classic ingredient looks like olive green ground pepper. Its mineral and *umami* flavours enhance foods, sauces, soups, even yoghurt. Bake into bread, add to ready meals, mix in muesli, rub on fish, sprinkle on potatoes. A large pinch a day fills all the micronutrient gaps in everyday foods.

“Breakfasting on a slice of bread baked with (this) brown seaweed could help burn more calories than half an hour on a treadmill” said The Daily Telegraph after award-winning obesity research found Seagreens® reduced hunger with no adverse effect on nutrient uptake (6).

Seagreens® seaweed *Ascophyllum* (Oak or Knotted Wrack) supports gastrointestinal health and digestion, is a natural prebiotic (food for beneficial gut bacteria), and with other dietetic measures contributes to weight regulation. It is high in polyphenols, helping to diminish the risk of chronic and degenerative diseases.



Pelvetia Pieces

Pelvetia is a mild, gentle seaweed, low in iodine, particularly rich in polyunsaturated fatty acids (PUFAs) and prebiotic dietary fibre.

It is an ideal food for children, in special needs diets, and helpful in nutritional rehabilitation and recovery.

It can be eaten dried as it is, or soaked in cold water for 5 min to soften, then added to all kinds of dishes (our favourite, as a topping on pesto pasta).

A Scottish nutritionist, Dr Jane Jamieson, devised a recipe for a highly antioxidant tonic using Seagreens® Pelvetia Pieces, grated ginger root, green tea and chopped lemons - ask for your free 'Tonic Recipe' from info@seagreens.co.uk or simply call us.

Per gram, Seagreens® Pelvetia has an ideal 3:1 ratio between Omega 6 and 3, good EPA and DHA in the Omega 3 (though additional DHA might be advised in ADHD), and almost 2,800µg (micrograms) of Omega 9 for immunity, insulin resistance, cardiovascular health and stress. It has ALA and EPA in almost equal measures.



The Mineral Salt

Healthier than any kind of salt, half Seagreens[®], half natural sea salt. You get salty, mineral and *umami* flavours, with comprehensive nutritional balance.

In research, 50% wrack seaweed was an antidote in rats fed salt at levels causing heart failure (15).

The risk of stomach cancer on a low salt intake of 4-6g daily was half that in men consuming 12-15g per day, in women only slightly lower (16).



The Ruby One

Replacing half your daily salt with seaweed was an innovation when we introduced The Mineral Salt in 2011.

The Ruby One takes it further, mixing two distinctively aromatic native wild seaweeds with just 25% natural Dorset sea salt.

The combination produces a unique, salty *umami* flavour and a comprehensive balance of rare dietary micronutrients, notable for vitamins B9 (for folic acid), B12 and K, and Omega 3 fatty acid, EPA and DHA, and DPA.

Use it on the most sophisticated foods, but breakfast will never be the same again!



References

- 1 Thomas, David E. *Mineral and trace element changes in Britain in 72 foods analysed annually between 1940 and 2002* from research (D. E. Thomas, DC, MRNT) based on McCance & Widdowson, *The Composition of Foods*, 6 Editions, pub. Royal Society of Chemistry and the Ministry of Agriculture, Fisheries and Food (MAFF) including fruit and vegetables, meat and meat products, cheeses and dairy products. 2007.
- 2 *Changing Diets, Changing Minds: how food affects mental health and behaviour*, a joint report of Sustain: the alliance for better food and farming, January 2006, in partnership with the Mental Health Foundation; and *Feeding Minds: The Impact of Food on Mental Health*, a report of the Mental Health Foundation (MHF), February 2006.
- 3 Combet E, Ma ZF, Cousins F, Thompson B, Lean ME. *Low-level seaweed supplementation improves iodine status in iodine-insufficient women*. British Journal of Nutrition. 2014;112(5): 753-61. A Seagreens Trust study at Glasgow University.
- 4 Wheater H. *Release of polyphenols from brown seaweed following in vitro enzymatic digestion*. (MSc Thesis): Newcastle University, 2012.
- 5 Chater PI, Wilcox M, Cherry P, Herford A, Mustar S, Wheater H, et al. *Inhibitory activity of Hebridean brown seaweeds on lipase activity*. Journal of Applied Phycology. 2016;28:1303-13.
- 6 Hall AC, Fairclough AC, Mahadevan K, Paxman JR. *Ascophyllum nodosum enriched bread reduces subsequent energy intake with no effect on post-prandial glucose and cholesterol in healthy, overweight males*. Appetite. 2012;58(1):379-86. A Seagreens Trust study at Sheffield Hallam University.
- 7 Nwosu F, Morris J, Lund VA, Stewart D, Ross HA, McDougall GJ. *Anti-proliferative and potential anti-diabetic effects of phenolic-rich extracts from edible marine algae*. Food Chemistry. 2011;126(3):1006-12 (and ref. 4).
- 8 Lyon V. *Seagreens® as a potential prebiotic and the role of probiotic bacteria in the production of nitric oxide in macrophages*. (MSc Thesis): Newcastle University, 2012.
- 9 O’Sullivan L, Murphy B, McLoughlin P, Duggan P, Lawlor PG, Hughes H, et al. *Prebiotics from marine macroalgae for human and animal applications*. Marine Drugs. 2010;8(7):2038-64.
- 10 Brownlee IA, Allen A, Pearson JP, Dettmar PW, Havler ME, Atherton MR, et al. *Alginate as a source of dietary fibre*. Critical Reviews in Food Science and Nutrition. 2005;45(6):497-510.
- 11 Shannon E, Abu-Ghannam N. *Seaweeds as nutraceuticals for health and nutrition*. Phycologia. 2019;58(5):563-577.
- 12 Cornish ML, Critchley AT, Mouritsen OG. *A role for dietary macroalgae in the amelioration of certain risk factors associated with cardiovascular disease*. Phycologia. 2015;54(6):649-66.
- 13 Fardet A, Boirie Y. *Associations between diet-related diseases and impaired physiological mechanisms: a holistic approach based on meta-analyses to identify targets for preventive nutrition*. Nutrition Reviews. 2013;71(10):643-656.
- 14 Cornish ML, Critchley AT, Mouritsen OG. *Consumption of seaweeds and the human brain*. Journal of Applied Phycology. 2017;29(5):2377-98.
- 15 Ge. S, Feng X, Shen L, Wei Z, Zhu Q, Sun J. *Association between Habitual Dietary Salt Intake and Risk of Gastric Cancer: A Systematic Review of Observational Studies*. Gastroenterology Research and Practice. 2012;2012:ID808120. Figures from British Journal of Cancer, quoted in Health & Science section, The Week. Issue 443, 17.01.2004.
- 16 Yamori Y, Nara Y, Tsubouchi T, Sogawa Y, Ikeda K, Horie R. *Dietary prevention of stroke and its mechanisms in stroke-prone spontaneously hypertensive rats - preventive effect of dietary fibre and palmitoleic acid*. Journal of Hypertension. Supplement. 1986;4(3):S449-52.

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