

The story behind the latest Seagreens jar



VOTED BY CAM AND CAM LIFESTYLE READERS 'BEST NEW PRODUCT' January 2011  
HIGHLY COMMENDED IN THE 'FREE FROM FOOD' AWARDS April 2011

**MORE FLAVOUR, LESS SALT****Awarded 'Best New Product' 2011**

Seagreens has launched The Mineral Salt following its successful scientific research, which shows that at least 50% of the sodium chloride in manufactured foods can now be replaced with its whole food seaweed of human food quality.

The Mineral Salt is 50% Seagreens® and 50% unrefined Cornish Sea Salt - uniting two of Britain's newest and most sustainable food producers from the far north and south of the British Isles.

The product is blatantly designed to heighten awareness among consumers, the media and the food industry of the salt reduction and mineral 're-balancing potential of seaweed'\*. The Mineral Salt was introduced simultaneously on both sides of the Atlantic and launched January 2011 under the banner 'Twice the flavour, Half the salt'.

Delegates attending the Weston Price Foundation conference on traditional foods in Philadelphia "loved it", while British consumers have said it is "just as good as salt & pepper" and "fantastic value".

**In January, The Mineral Salt was voted Best New Product by readers of CAM and CAM Lifestyle, the leading magazines on complementary and alternative medicine.**

**In April, The Mineral Salt was Highly Commended at the Free From Food Awards presented by Antony Worrall Thompson in London. "Interesting, complex flavour" said the judges. "Good salt hit, excellent way of improving nutrient profile, tastes like authentic salt, seaweed doesn't come through too much, how clever is this?"**

The 100g glass jar with shaker screw cap is available from good natural food stores and delicatessens and retails for £4.95. A grinder top and refill pack are to be introduced soon. For their nearest stockist, consumers should enter 'stockist' in the search box at [www.seagreens.co.uk](http://www.seagreens.co.uk) or call Seagreens Information Service on 0845-0640040 / [info@seagreens.co.uk](mailto:info@seagreens.co.uk) (from overseas +44-1444 401207).

Product information can be viewed at: [www.seagreens.co.uk/mineralsalt](http://www.seagreens.co.uk/mineralsalt)

### **Rewarded for Food Innovation**

**In the global race to reduce salt (sodium chloride) a little known Anglo-Scottish enterprise is poised to join the front runners. Its wild seaweed ingredients may be able to reduce salt in food to well below the internationally required levels.**

In 2007 specialist human food seaweed producer Seagreens® was selected for the Food Innovation Project, a British government funded research project undertaken at Sheffield Hallam University, tasked to identify natural alternatives to excess fats, sugars and salts in manufactured foods.



Isle of Lewis seaweed by Leila Angus [www.brighterstill.com](http://www.brighterstill.com)

By 2009 the researchers at Sheffield found that “as well as maintaining the taste of the food, Seagreens dried granulated seaweed also helped to preserve it, potentially lengthening its shelf life in a similar way to salt”.

After initial work in meat replacement products, research focused on bread, bread being the primary everyday source of excessive sodium chloride in the national diet.

Researchers have replaced up to 100% of the salt with seaweed. The researchers studied different forms of the seaweed in various kinds of loaves. Bake and sensory qualities, rheological studies in a model system and large scale production have been addressed, as well as the purity and quality of the seaweed.

### **Consumers prefer salt reduction with seaweed**

Wholemeal bread slices containing 50:50 coarse seaweed granules and salt were preferred by 67% of taste panelists against 20% preferring the normal full salt control.

75% of the panelists preferred plain white bread with the same 50% seaweed replacement of salt.

Bread containing sun-dried tomato and basil with 100% coarse seaweed granules was preferred by all the panelists, with no negative effect on bake and sensory quality.

Even replacing 100% of the normal salt additive, the seaweed contained only 0.3g naturally occurring sodium and chloride per 100g bread.

In all these examples the seaweed was a natural whole food with no additives or extractions.

Hebridean Seagreens Ltd, based near Stornoway on the Isle of Lewis, harvests wild seaweed for human food among the Outer Hebrides. It is a joint venture between Sussex-based Seagreens Ltd and Hebridean Seaweed Company Ltd.

**The 2010 Crown Estate Business Award for Marine Enterprise was presented to the factory in July.**



Crown Estate Business Award for the Hebridean seaweed factory (from left):  
Dinah Nicols, Crown Estate board member; Roger Bright, Chief Executive of the Crown Estate; Malcolm Macrae,  
Technical Director, Hebridean Seaweed Company, Sir Stuart Hamson, Crown Estate Chairman, and Rob Hastings,  
Director of the Marine Estate

**This year, Seagreens has established the Seaweed Health Foundation with offices in Edinburgh and London.**

**With food producers and its academic partners, the Foundation will further develop the ingredient opportunities for this nutritious natural food in applications from baking, ready meals and special diet foods to comminuted meat, cheese and sauces!**

20% of Seagreens ingredient sales are donated to the Seaweed Health Foundation.

#### **Awarded for research achievement**

Lead researcher at the Sheffield Centre for Food Innovation, Dr Andrew Fairclough was reported in the American journal Nature Medicine (August 2010)\*, as saying that with the right formula, bread “looks the same; it bakes the same. You can’t tell if it’s Seagreens or real salt”.

At the 2010 Chester Food and Environmental Science Week in the UK, Fairclough announced he had “demonstrated for the first time that Seagreens *Ascophyllum nodosum* is a potential replacement for salt as sodium chloride and can be used to achieve salt levels below the recommended limit specifically in breads with additions”.

Fairclough’s findings will appear in an upcoming issue of the prestigious ‘International Journal of Food Science and Technology’.

Using much higher levels of seaweed in bread, the Seaweed Health Foundation sponsored an early study in obesity which lends additional weight to the consumer acceptability of seaweed as a food ingredient and paves the way for further research in related areas of public health concern.

In November the Sheffield researchers won the 2010 Alpro Foundation Masters Award for their first satiety study in this field.

**The Alpro Foundation Award was presented at the 11th National Nutrition and Health Conference in London on 26th November 2010.**



From left, Professor Tom Sanders, Head of the Diabetes and Nutritional Sciences Division at the School of Medicine, King's College, London, who chaired the Conference, with Jenny Paxman, Associate Lecturer at Sheffield Hallam University, Sheffield, and Alpro Foundation Masters Award winner Anna Hall

Seagreens awards are shown on their website at: [www.seagreens.com/Media/Awards.aspx](http://www.seagreens.com/Media/Awards.aspx)

**Is seaweed the healthiest option?**

Although Michael Jacobson, co-founder of the Centre for Science in the Public Interest, a Washington, DC-based advocacy group, has made the point that “dozens of approaches are being used and should be used to reduce salt in foods,” and “there is no one magical salt substitute”, this organic whole food seaweed option may take some beating.

Wild seaweed is widely recognised to be an outstandingly healthy option food. It is a uniquely rich source of all the minerals and trace elements, and has the broadest balance of nutrients of any natural whole food\*.

Some years ago, a Japanese cardiovascular study indicated that seaweed may be “an antidote to excess sodium consumption” (Y. Yamori et al., 1986).

Seagreens’ founder Simon Ranger, a creative brand consultant who spent the 80s and 90s criss-crossing the Atlantic for international clients (“but ironically, no food companies”) quotes conventional ingredient manufacturers on current salt reduction.

They admit (‘Staying smart about salt’, Food Technology magazine, pp 26-35, March 2008) that most of these “dozens of approaches” to salt reduction are complex, mineral-based “sodium reduction systems” that seek to “mimic the characteristics of salt: water soluble, heat and acid stable, easy flowing, without an aftertaste” and all of this “with ingredients that are Generally Recognised As Safe”. But then, Ranger notes “so is sodium chloride”.

Most of these mineral products “do not have a clean taste”, so contain unwelcome added flavourings to mask the metallic aftertaste associated with for example, potassium

chloride, a popular 'alternative' in 1980s salt brands like Solo and LoSalt, which he says have "had their day".

"These are public health concerns, and what has changed is that consumers, acutely aware of the ingredient issues too, no longer entertain cosmetic change. Now they demand real substance, and this is recognised by senior managers of the largest retailers and their manufacturing suppliers."

**Seagreens® *Ascophyllum nodosum granules***  
**Table 1 - Typical nutritional profile per gram**

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<b>• Protein</b> 54mg
<ul style="list-style-type: none"> <li>• <b>Amino acids</b> (bound form:) Cysteine 0.90mg, Histidine 0.98mg, Isoleucine 2.33mg, Leucine 4.07mg, Lysine 2.72mg, Methionine 0.68mg, Phenylalanine 2.66mg, Threonine 2.83mg, Tryptophan trace, Valine 2.96mg, Alanine 3.91mg, Arginine 2.43mg, Aspartic acid 7.20mg, Glutamic acid 1.40mg, Glycine 3.05mg, Proline 2.36mg, Serine 2.66mg, Tyrosine 1.44mg (free form:) Threonine 0.034mg, Alanine 0.47mg, Aspartic acid 0.23mg, Glutamic acid 0.68mg</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Betaines</b> Glycine Betaine trace, Gamma Amino Butyric Acid Betaine trace, Delta Amino Valeric Acid Betaine trace, TML (Laminine) trace, L-Carnitine trace, Trigonelline trace; enzymes and valuable compounds which cannot be artificially formulated such as the phenolic compounds including free phloroglucinol, fucophorethols, and phlorotannin derivatives</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Carbohydrate</b> 580mg (including non-starch polysaccharides Algin 175mg, Fucose and Fucoidan 90mg, Mannitol 60mg, Methylpentosans, Laminarin 35mg, Mannuronic acid 210mg) and essential fatty acids EFAs</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Minerals</b> Calcium 15mg, Chlorine 30mg, Magnesium 6.4mg, Nitrogen 10.5mg, Phosphorus 1.5mg, Potassium 31mg, Sodium 27mg, Sulphur 30mg</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Trace elements</b> Antimony trace, Boron 0.06mg, Cobalt 5.4µg, Copper trace, Fluorine 0.2mg, Germanium trace, Gold trace, Iodine 670µg, Iridium trace, Iron 0.7mg, Lithium trace, Manganese 0.03mg, Molybdenum 0.65µg, Platinum trace, Rubidium trace, Selenium 0.15µg, Silicon 1mg, Silver trace, Tellurium trace, Titanium trace, Vanadium 2.3µg, Zinc 0.04mg</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Vitamins</b> A (antioxidant carotenoids beta carotene, and fucoxanthin, violaxanthin and chlorophyll) 178µg, B group (including B12* Cyanocobalamin 0.004µg, Bc Folic and Folinic acid 0.6µg, B1 Thiamine 0.3µg, B2 Riboflavin 7.5µg, Niacin (anti-pellagra) 20µg, Pantothenic acid, B6 Pyridoxin, Choline) 8.9µg, C (antioxidant) 1.25mg, D (Cholecalciferol) 0.01µg, E (antioxidant) including the complete set of isomers 0.23mg, H (Biotin) 0.30µg and K (Menadione) 10µg</li> </ul>
1g = 1000mg = 1000000µg

**A broad nutritional profile for food, and a strong global reach for Seagreens**

Seagreens' founder Simon Ranger says: "If we succeed in replacing half the salt in a range of manufactured foods, we could be introducing up to 4.5 grams of whole food seaweed into the national diet because the current daily salt intake is 9 grams or more. That is roughly equivalent to the level of seaweed in the traditional Japanese diet (latest Japanese statistics 1964), among the healthiest in the world."

Seagreens are species of wild bladderwrack which even for seaweed have a distinctively broad balance of nutrients - a genuine whole food, quite unlike even the very best salts.

"That is why we are keen to explore the potential benefits to cardiovascular health and obesity, and why we set up the research Foundation. Those who are already in tune with this kind of approach, can lead an exciting development in the 21st century which has real and worthwhile implications for the nation's health in the decades to come."

Ranger's company Seagreens Ltd has been pioneering human food quality seaweed production for more than a decade.



*Feed the Foundation of Health*

**In doing so an entirely new kind of seaweed industry is developing in Scotland, focussing specifically on mainstream food and health applications for its abundant North Atlantic seaweed.**

Seagreens has further partnered with long established, international ingredient specialist Gee Lawson, with offices in the Nordic region, Switzerland and Italy, thereby gaining global reach with distribution associates worldwide.

SEAGREENS MANUFACTURING INGREDIENTS

Seagreens Certified Ingredients enquiries:

<http://www.seagreens.com/Contact/ManufacturingIngredients.aspx>



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Email [info@geelawson.co.uk](mailto:info@geelawson.co.uk)

Website [www.geelawson.co.uk](http://www.geelawson.co.uk) and for Seagreens:

<http://www.geelawson.co.uk/principals/seagreens/2>.

For a food industry presentation: [www.seagreens.com/Media/Presentations.aspx](http://www.seagreens.com/Media/Presentations.aspx)

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**MEDIA INFORMATION ON ALL POINTS OF INTEREST**

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\*please request copies of the magazine articles 'The Rebalancing Potential of Seaweed' and 'Seaweed Can Reduce Salt Intake in Food' by Simon Ranger and 'Parse the Salt, Please' by Stephen Strauss.

**SEAGREENS CONSUMER PRODUCTS**

Retail enquiries: Seagreens Trade Direct Tel 01342-888095 [tradedirect@seagreens.co.uk](mailto:tradedirect@seagreens.co.uk)