PureSea® Protect

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PureSea® Protect is a unique, new and innovative ingredient which delivers all the benefits found in the gold-standard PureSea® seaweed with none of the flavour or aroma of the sea. PureSea® Protect allows various EFSA Approved Health Claims through the delivery of natural iodine.

PRODUCT PROFILE SHEET

After several years of intensive R&D, proprietary microencapsulation processes have been developed enabling PureSea® Protect to meet consumer trends for healthy ingredients with purpose, offering nutritional benefits, approved health claims, a genuine story of provenance and sustainability, with the advantage of being easily added into innovative delivery forms without worrying about the typical taste and aroma of seaweed.

Why PureSea®

- **PureSea® is a high-quality seaweed ingredient**, sourced from the pristine Scottish Outer Hebrides. PureSea® is sustainable, manufactured using proprietary production methods and the only seaweed with DNA authentication.
- **PureSea® enables six EFSA Approved Health Claims** relating to natural iodine source supporting normal **thyroid** function, **energy** yielding metabolism, **cognitive** health, **skin** maintenance, functioning of the **nervous system** and **growth in children**.
- Iodine is **essential at all life stages**, including fertility, pregnancy, child development, and throughout all adult life. However, 5 billion people globally do not consume enough iodine[1], with Europe now being considered deficient in iodine.

Why PureSea® Protect

- **Protect your Flavours**: The seaweed flavour and aroma are locked away by a coating of plant-based protein, protecting your finished products by ensuring minimal flavour impact of this neutral-coloured powder.
- **Protect your Nutrients:** The protein coating locks key nutrients, protecting them during processing and digestion, making them more available when needed as showed by an independent study[2].

Product Advantages

- ✔ **Six EFSA Claims allowed**
  with a small inclusion
- ✔ **All the Benefits of PureSea®**
- ✔ **Low Seaweed Flavour or Aroma**
  Subtle flavour/aroma when incorporated into a finished product formulation due to low dosages required to meet iodine health claims
- ✔ **Neutral Coloured Powder**
- ✔ **Good Dispersion in Water**
- ✔ **Natural Source of Iodine**
- ✔ **Multiple Health Benefits**
  Targeting different population and ages
- ✔ **Sustainable**
- ✔ **DNA Authenticity and Traceability**
- ✔ **Provenance**
- ✔ **Proprietary Production**

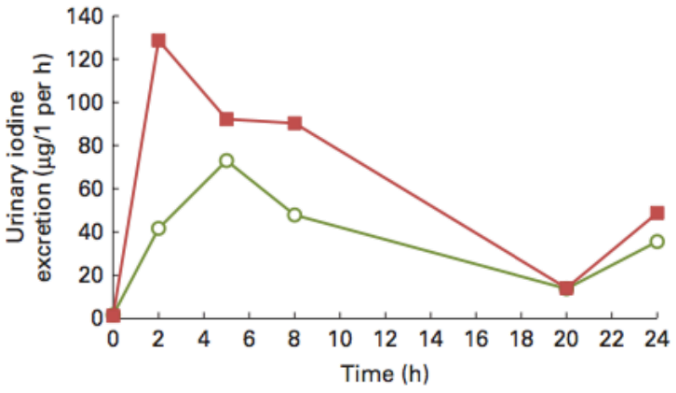
Research

Natural Iodine vs Synthetic

Independent research shows how PureSea® Natural Seaweed provides a slower and more sustained release of iodine compared to synthetic sources that are quickly absorbed and quickly excreted[3].

Graphic 1

Urinary iodine output (µg) over time (h) after consuming PureSea® species (green) and Potassium Iodide (red)



LEHVOSS Nutrition

www.lehvoss-nutrition.com

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Targeted Release

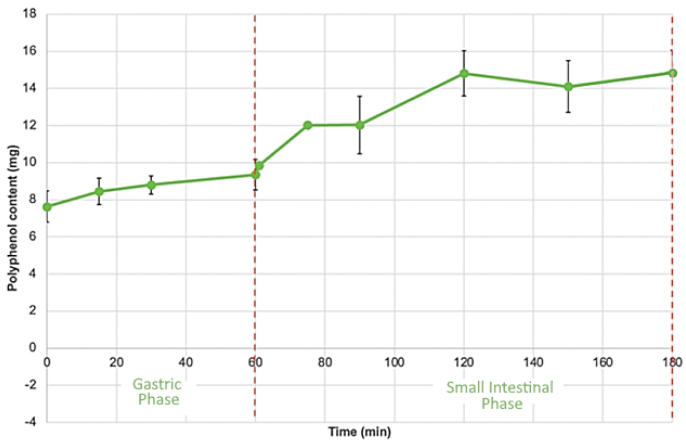
An independent study[2], using polyphenols found in PureSea® Protect as markers for nutrient release, demonstrates how the natural coating in PureSea® Protect ensures better protection of key nutrients during digestion.

The study highlights a lower release of the marker nutrient (polyphenols) in the gastric phase — where absorption and utilisation are not really needed — compared to the increased release in the small intestine phase, for better nutrient absorption.

For more information, download a summary of the study here.

Graphic 2

Polyphenol Release from PureSea® Protect over time in the Upper GL Tract



Iodine Research

In addition, PureSea®'s natural iodine source is supported by extensive research demonstrating benefits for thyroid health, fertility, pregnancy, menopause, energy and sports recovery, weight management, mental health and performance, skin health, and other beauty-from-within effects.

Further details can be found on the PureSea® Natural page.

Product Safety

Studies published in the British Journal of Nutrition[4] using the PureSea® seaweed species, along with batch testing, demonstrate the effectiveness, bioavailability and safety of PureSea®.

Please note no chemicals or solvents are used during the manufacturing process as PureSea® Protect is obtained by aqueous infusion. In addition to this, lentil proteins offer a natural, plant-based coating solution, and lentils are commonly used and consumed as food.

Product Range

Ingredient	Iodine Content	Grade	Particle Size
PureSea	420 (+/-) 84 mg/kg	Microencapsulated Powder	1-5 microns

Product Applications

With low inclusion rates, PureSea® Protect enables six EFSA Approved Health Claims, and offers a diverse range of benefits for multiple applications such as:

- **Sport Nutrition/Active Nutrition**

This ideal ingredient can be used in protein and other powder blends with sweet flavours, adding a health claim linked to **energy and metabolism**.

- **Collagen and Beauty from Within**

Utilise this low-flavour ingredient within collagen and beauty-from-within powder blends, enabling health claims of **skin health**, and extensive evidence supporting healthy hair and nails.

- **Superfood Blends**

With flavour and powder dispersion being key to consumer uptake, this is an **easy-to-incorporate ingredient**, providing approved health claims from essential natural nutrition that is often overlooked.

- **Foods**

PureSea® Protect offers the story and nutritional benefits of seaweed without affecting flavour, making it ideal for use in a wide range of food products.

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About

SEAWEED & CO.

Seaweed & Co. is the company behind PureSea®. Founded by marine biologist, Dr Craig Rose (aka Doctor Seaweed®), with a highly experienced board and panel of independent experts that have developed the research driven and accredited PureSea® ingredient

References

1. *The Lancet: (2024)* Global estimation of dietary micronutrient inadequacies: a modelling analysis. *Volume 12.*
2. *Independent Research Aelius Biotech*
3. *Combet et al. (2014)* Low-level seaweed supplementation improves iodine status in iodine-insufficient women. *British Journal of Nutrition, 112(5), pp.753-761.*
4. *Research undertaken in conjunction with Newcastle University Medical School, Published 2021*