

PATENT INSIGHTS: ALGAE AS A FUTURE SUPERFOOD

Algae is one of the most promising foods for the future: easy to cultivate, offering an abundance of protein and other nutrients, whilst maintaining biodiversity.



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Report Content



- At a glance
- Mintel's perspective

WHAT CONSUMERS WANT AND WHY

- Algae will benefit from the demand for natural ingredients
- Consumers are interested in free of artificial flavour and colour claims

PRODUCT INNOVATION TRENDS

- Rise in food and drink launches containing algae
 - Graph 1: percentage of food and drink launches featuring algae based ingredients*, Apr 2015-Mar 2020
- Spirulina is the most popular edible algae in food, drink and healthcare categories
 - Graph 2: percentage of algae* containing food, drink and healthcare launches, by selected edible algae variety, Apr 2015-Mar 2020
- There is growing interest in seaweed-based functional food and drinks
- There is an emerging trend of natural and free-from claims

THE PATENT LANDSCAPE

- Patent activity for algae-based food and drinks continues to grow
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 - Graph 3: algae based food and drink patent families, published each year, 2010-19
- Seaweeds are an important source of food in some Asian countries and patent activity also shows their importance in these areas (including China)
- Corbion NV, a Dutch food and biochemical producer, leads in algae-based ingredient innovation
 - Graph 4: top 10 organisations with currently active* patent families for the use of algae in food & drink, Jan 2020

Algae as a sustainable protein source

- Consumer interest in 'better for me, better for the planet' food and drink should continue to drive demand for plant proteins
 - Graph 5: percentage of protein rich drink launches claiming to be vegetarian, vegan/animal free and sustainable, Mar 2015 - Feb 2020
- Consumers show interest in algae-based protein
- High-protein snacks based on algae could migrate further from Asia to Western regions like Europe and the US
- Demand for proteins that are compatible with both plant-based and gluten-free dieting could open opportunities for algal proteins

Patent insights: algae as a future superfood

- Soy is a prevalent plant protein source, but some consumers are seeking alternatives
- There are opportunities for science to help producers to overcome the sensory challenges of algal proteins
- Combat unpleasant odour, taste and colour profiles of algal proteins

Algae: nutritional ingredient and salt substitute

- Consumers consider algae as a health-benefiting food ingredient
- Algae: an exciting nutritional source
- Algae as a promising source of prebiotics
- Algal oil as a cruelty-free omega fatty acid source
- Algae-based carotenoids for health and wellness
- Micronutrients from algae to combat malnutrition
- Algae-based health functional food, drinks and supplements
- Salt reduction in food and drink
- Replace table salt with algae-based low sodium salt

Flavouring ingredients and natural food colour

- Algae as food flavouring agent
- Seaweed flavoured snacks are popular in Asia
- Algal pigments as a safe and natural food colour
- Phycocyanin as a natural blue colour for food and drink
- Algae-based natural blue colour has gained popularity among food manufacturers

THE IMPLICATION

- Recent developments in improving the taste, odour and colour profile of algal protein might disrupt the existing plant protein market

APPENDIX

- Research Methodology
- Key algae-based food and drink ingredient patent examples
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