

PROSEAFOOD

Innovative processing of seaweed for novel, healthy food products and ingredients

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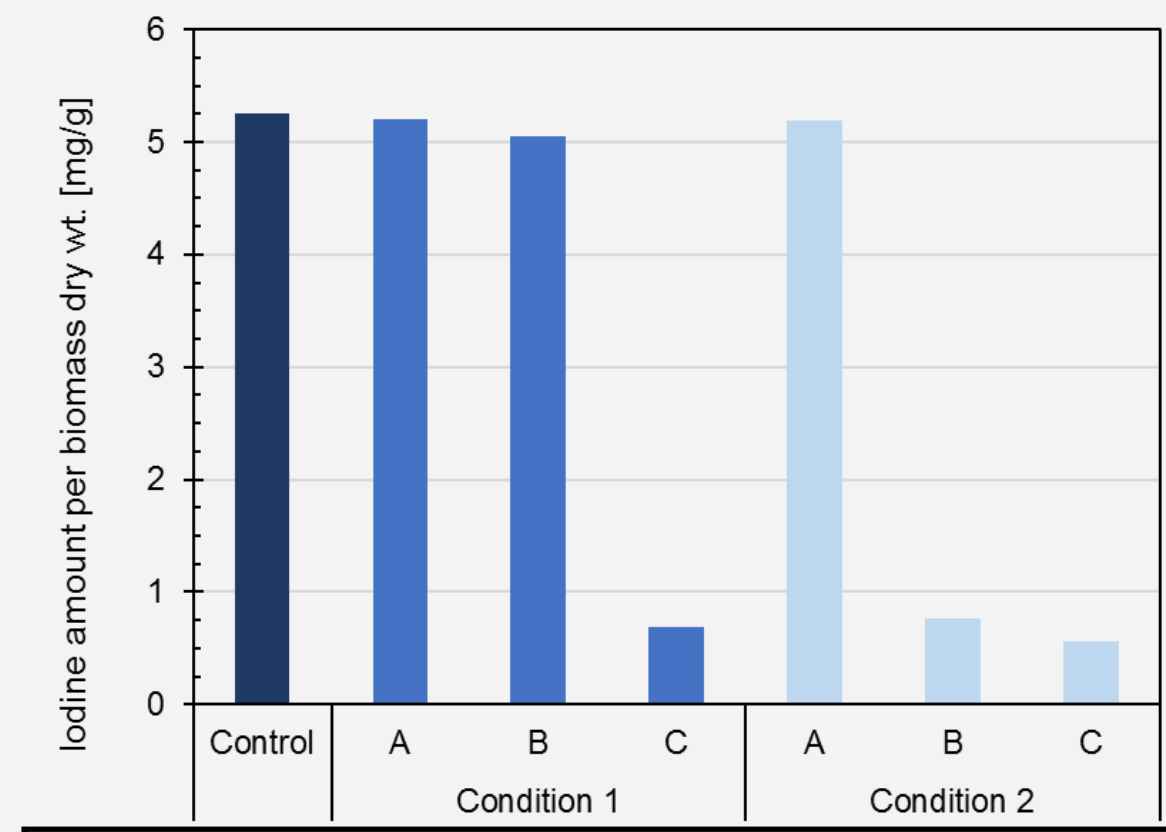
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The primary objective of the ProSeaFood project is to apply advanced biotechnological processing methods to increase the digestibility and sensory properties of brown seaweeds. This will be achieved through employing enzymes and fermentation to increase nutritional availability, and remove inedible or potentially harmful substances. Based on the processed ingredients, the project will further develop innovative food products that are nutritious, tasteful and have well-documented effects on consumer health.

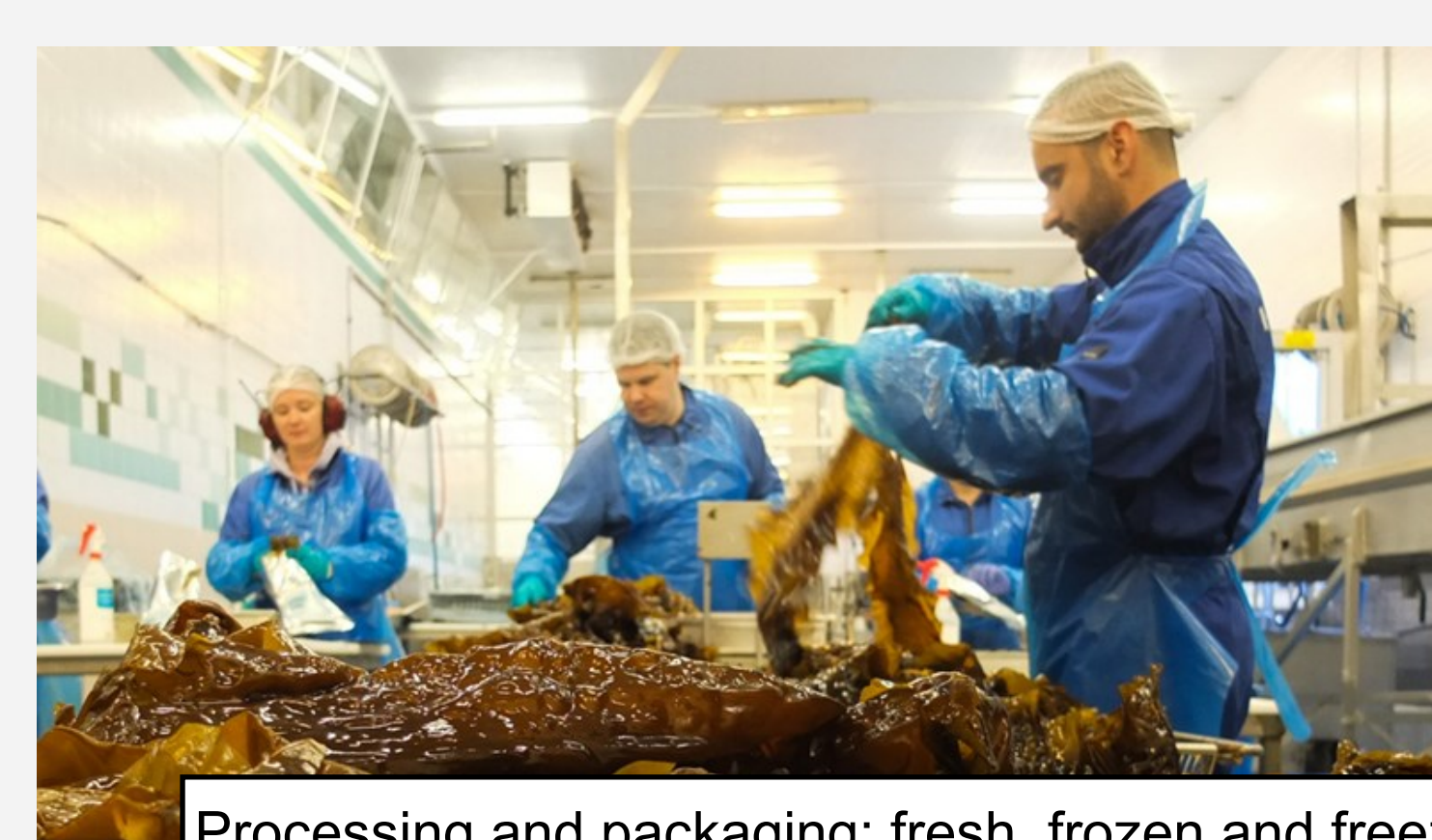
SEAWEED HARVEST AND INITIAL PROCESSING



Harvesting of *Saccharina latissima* and *Alaria esculenta* outside Frøya, Norway



Development of pre-treatments to reduce iodine and salt content in seaweed

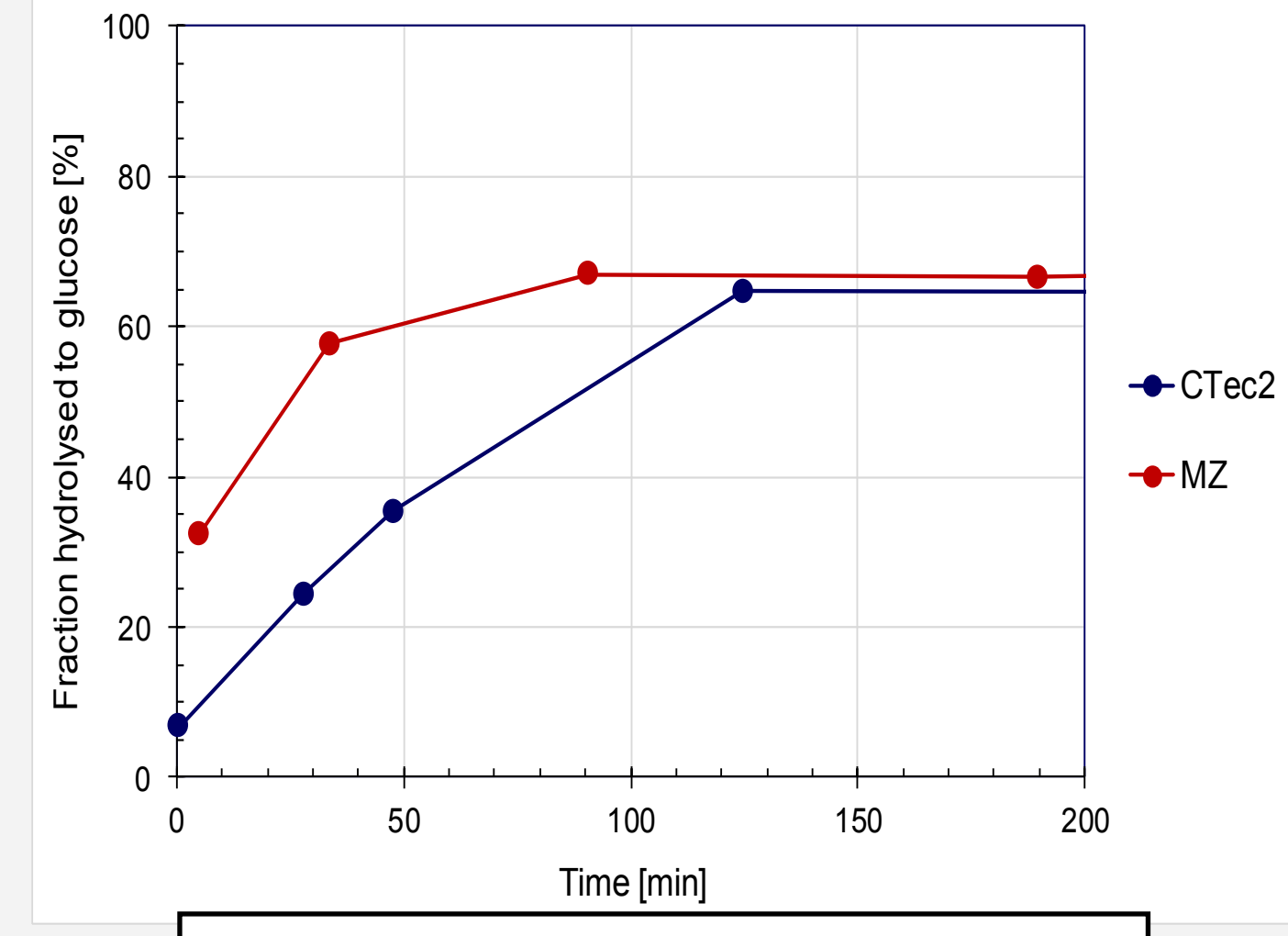
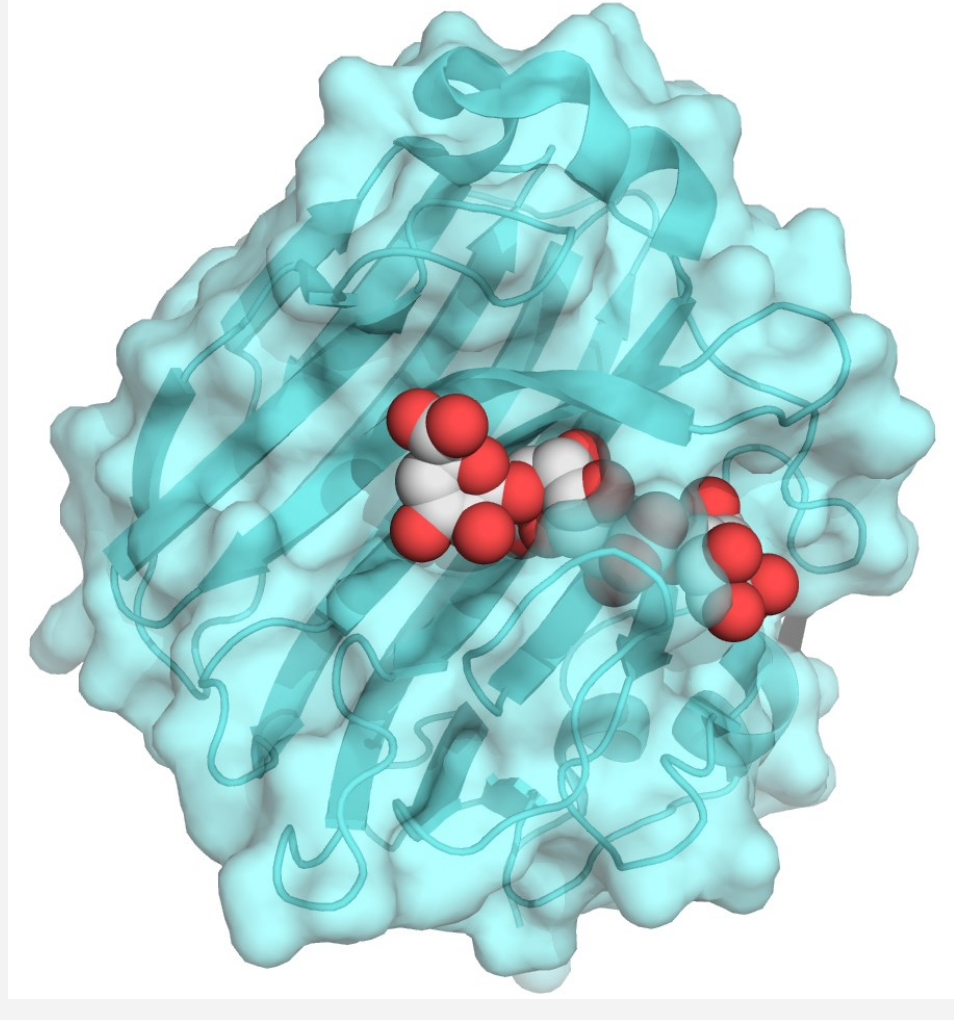


Processing and packaging: fresh, frozen and freeze dried samples with organic certification, followed by distribution to project partners



ENZYMATIC PROCESSING

Enzymatic degradation of structural polysaccharides to increase digestibility and bioavailability



Generation of prebiotic oligosaccharides for fermentation

FERMENTATION OF SEAWEED

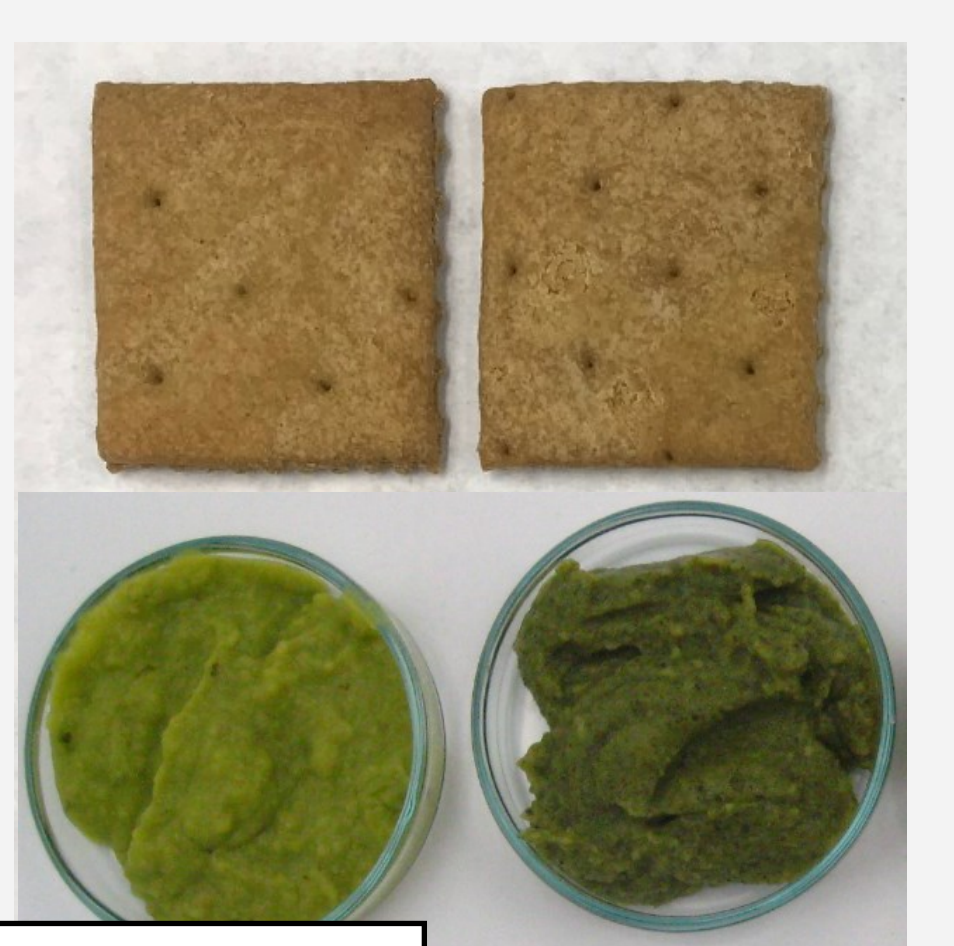
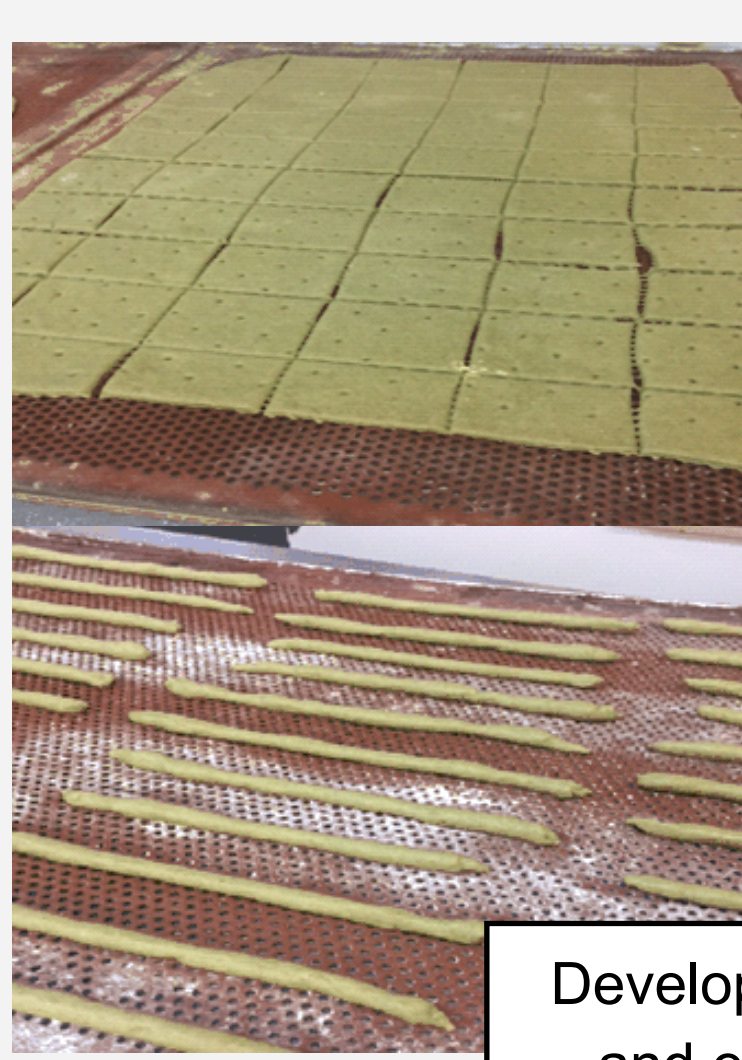


Fermentation of whole seaweed (ensilation) or processed seaweed ingredients to increase nutrients, introduce novel sensory properties, and promote a healthy gut microbiota

PRODUCT DEVELOPMENT AND CHARACTERIZATION



Conditioning of processed ingredients, and characterization of physical properties and nutritional profile



Development of bakery and vegetable-based products, and evaluation of sensory and nutritional properties

Ingredients	Processing condition 1		Processing condition 2	
	<i>S. latissima</i>	<i>A. esculenta</i>	<i>S. latissima</i>	<i>A. esculenta</i>
Energy (kcal/100g)	301	275,1	192,9	249,5
Humidity (g/100g)	89,7	89,1	1,5	6,2
Protein (g/100g)	13,2	16,6	12,3	10,7
Carb.hyd. (g/100g)	55,3	43,1	33,3	49,4
Fat (g/100g)	2,9	3,7	1,1	1,1



SEAWEED ENERGY SOLUTIONS AS



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04 / 2018 — 03 / 2021