



# Norwegian seaweed Biorefinery Platform

Newsletter #5  
April - May 2021

## Leader News

Harvest of the seaweed has started, and a lot of experiments have already been started on fresh seaweed that has been brought to lab.

This year's master students are now finishing up with a lot of promising results that you will definitely hear more about later.

We're still open for research suggestions from the stakeholders.



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## Latest News

### Kelp harvesting at Frøya

The kelp harvesting season 2021 at Frøya has started! Employees at Sintef industry and NTNU have at several occasions retrieved freshly harvested *Alaria esculenta* (winged kelp) and *Saccharina latissima* (sugar kelp) by Seaweed Solutions. This raw material will be used in a series of kelp experiments throughout the year, focusing on extraction, conservation and characterization methods of macroalgal biopolymers, polyphenols and pigments, bioactive properties, and refinement of extracted products.

### A shared Seaweed Lab between SINTEF I and NTNU

A seaweed processing lab is currently being set up at Gløshaugen, Trondheim. The Lab is equipped to handle up to pilot-scale processing seaweed as well as characterisation. The first real test of the lab will occur during this harvesting period.



Photo: Katharina Nøking-Eide

PhD candidates Katharina Nøking-Eide and Paulina Sandberg Birgersson are very excited to get their hands on some fresh kelp

## Stakeholder News

### It's the season for seaweed

This year's harvesting season is in full swing and shaping up to be a good one. The season is almost complete in Western Norway with Ocean Forests already harvesting 177 tonnes of seaweed. While in Central Norway, the season is just beginning and Seaweed Solutions are putting their recently upgraded facilities to good use.

### Updated Species Keys for Norwegian Marine Macroalgae

The macroalgal diversity in Norway is very high, due to perfect conditions for these organisms along our long coastline; clean water with high salinity and relatively low temperatures. Species keys are useful tools when one wants to monitor the algal diversity at rocky shores or in our kelp forests. Katharina (SINTEF), one of the PhD-students connected to the Norwegian Seaweed Biorefinery Platform, has been contributing in writing a new version of the keys for Norwegian Marine Red, Brown and Green Macroalgae. You can find the new keys on [botaniskforening.no](http://botaniskforening.no)



Check out the new keys

### Bioprosessering av tare – hvilket utstyr trengs?

The 8th of April saw a successful seminar presenting results from the Norwegian Seaweed Biorefinery Platform. To see more information and the slides presented during the seminar follow the link.



More Info



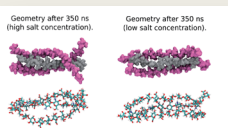
Photo: Svein Jarle Horn

The NMBU seaweed processing team in the lab. PhD student Bjørn Pedersen, Post doc Nanna Rhein-Knudsen and professor Svein Jarle Horn.

### Enzymatic tools for fucoidan processing

At NMBU we are working on establishing enzymatic tools for fucoidan processing. This will make us able to produce fucoidan oligosaccharides of specific lengths and degree of sulfatation. The goal is to link structure to biological activities. Recent work at NMBU includes cloning, production and characterization of fucoidan active enzymes. We are currently testing activity on real fucoidan substrates from *Saccharina latissima* and *Alaria esculenta*.

## Latest publications



Alginate gels crosslinked with chitosan oligomers

Read more

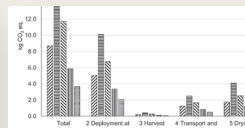
[doi.org/10.1039/D1RA01003D](https://doi.org/10.1039/D1RA01003D)



Mannuronan C-5 epimerase AlgE4

Read more

[doi.org/10.1093/glycob/cwab025](https://doi.org/10.1093/glycob/cwab025)



Environmental impacts of protein-production from farmed seaweed

Read more

[doi.org/10.1016/j.jclepro.2021.127301](https://doi.org/10.1016/j.jclepro.2021.127301)



Click here to see a complete list of all the project publications

## Upcoming Events

1 Sep

Norsk algekonferanse 2021  
Nye løsninger fra lab til marked



More Info

Read about the EU project Genialalg

Read more

