



# Seaweeds in the kitchen

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## Seaweeds in the home kitchen

### *Seaweeds in the kitchen*

#### **SEAWEEDS ARE EATEN ALL OVER THE WORLD**

Although brown, red, and green seaweed species have been eaten by all coastal peoples since prehistoric times, their regular consumption has survived to the present time, primarily in the modern cuisines of Asian countries such as Japan, Korea, China, and the Philippines.

In Japan, especially, seaweeds are both fully integrated into the daily diet and used to create gourmet specialties. Everywhere in East Asia, there is a wealth of well-known traditional dishes incorporating seaweeds that reflect the great diversity of national and regional cuisines. An impressive variety of species, as well as blue-green microalgae, are used in a wide range of foods,



► Fresh salted *wakame* for sale at a street market in Katsuura, Japan.

such as soups, salads, desserts, pickles, snacks, and flavorings. Elsewhere, they are overwhelmingly associated with the preparation of Asian-style meals, particularly sushi, which has become a global phenomenon.

Nevertheless, while the practice of eating seaweeds as part of the normal diet has almost died out in the Western world, it can still be encountered here and there. For example, within Europe, seaweeds are firmly entrenched in the popular cuisines of Brittany, Wales, and Ireland. On Iceland, dulse is eaten in dried form as a snack or mixed into salads, bread dough, or curds, just as it was in the time of the sagas. And the pattern of consumption is on





### WAKAME SALAD WITH TOFU

Somewhat firm *tofu* is a good addition to a seaweed salad. The white of the *tofu* contrasts well with the color of the seaweeds to create an appealing dish.

#### Wakame salad with *tofu*

*serves 4*

5g dried *wakame* cut into 2–3 cm squares

250g *tofu*, diced

250g coarsely grated carrot

1 cucumber, diced

For the dressing:

2 tbsp rice vinegar

2 tbsp soy sauce

2 tbsp marinade from pickled ginger

Prepare the dressing. Meanwhile, soak the dried seaweeds in cold water for 10 minutes and then drain the water. Mix the *wakame* with the *tofu*, vegetables, and dressing. Add salt to taste and sprinkle toasted sesame seeds on top.



▲ Dried *hijiki*.

### SIMMERED HIJIKI

*Hijiki* is a versatile brown alga, but, as it tastes somewhat bland on its own, it is best to combine it with other ingredients. An ideal way to add taste substances is to simmer it in the soup stock *dashi*, which will impart a slightly smoky flavor to the seaweed. This salad will keep in the refrigerator for a couple of days.

#### Simmered *hijiki* and carrot salad

*serves 4*

8g dried *hijiki* or *arame*

1 carrot, julienned

75ml *mirin* (sweet rice wine)

50ml *dashi* (Japanese soup stock)

soy sauce, sugar

Soak the dried *hijiki* in cold water for about 30 minutes. Drain the water and wash the seaweed thoroughly several times in clean water. Mix the seaweed with the carrot strips and add the *mirin* and *dashi*. Simmer over a very low heat until most of the liquid is gone. Adjust the taste with soy sauce and sugar. Allow to cool before serving.

► A dried specimen of the red alga *Claudea elegans* from the collections of the Natural History Museum in London.





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*Seaweeds and sushi*

◀ Making *nori* from *Porphyra* in Japan. Woodblock print by Katsukawa Shunsen (1762-ca. 1830).

## Seaweeds and sushi

The red alga *Porphyra*, in dried and toasted form, is the only type of seaweed used for making sushi. All sushi is based on cooked rice, flavored with rice vinegar, salt, and sugar. This sour-sweet rice is combined with fish, shellfish, vegetables, omelette, or roe. *Nori* is used in different ways in sushi to add taste, color, and texture. Sheets of *nori* are needed to give support and structure to *maki-zushi* and *gunkan-zushi* and small strips sometimes tie pieces of fish, omelette, and shellfish to the hand-formed rice balls in *nigiri-zushi*.

### ONIGIRI—SEAWEEDS ON THE GO

The very simplest Japanese brown-bag lunch consists of *onigiri*. This is plain cooked rice formed into a decorative triangular or oval shape, which is wrapped in a sheet of *nori* and usually dipped in soy sauce as it is being eaten. There is often some filling inside the rice ball, for example, pickled *shiso*, *umeboshi*, *nattō*, cooked tuna, or a little seaweed salad.

*Onigiri* can be bought ready made and wrapped in plastic in Japanese kiosks and convenience stores. The sheet of *nori* is sealed off in its own package to keep it dry and preserve its crispness. As the seaweed quickly absorbs moisture from the rice ball and becomes soft, it is wrapped around the rice just before it is to be eaten.

Japanese vocabulary: *Shiso* is a pungent green herb (*Perilla frutescens*). *Wasabi* is Japanese horseradish (*Wasabi japonica*). *Nattō* is made from fermented soy beans. *Umeboshi* are salt-pickled Japanese plums (*Prunus mume*). ‘Sushi’ and ‘zushi’ have the same meaning, but are pronounced with an s and a z sound, respectively. In Japanese, sushi is pronounced with a voiced z when linked to another word. For this reason, ‘*nigiri-sushi*’, for example, is pronounced and written as ‘*nigiri-zushi*.’



▲ *Onigiri*—sushi rice wrapped in sheets of *nori*.

## Julie's crispbread with seaweeds

*makes about 50 pieces*

- 150ml rolled oats
- 150ml flaxseed
- 100ml sunflower seed
- 100ml pumpkin seed
- 2 tsp salt
- 250ml flour
- 1 tsp baking powder
- 4 tbsp mixed seaweed granules (sea lettuce, dulse, bullwhip kelp, giant kelp, *mekabu*)
- 200ml water
- 2 tbsp grapeseed oil

*Seaweeds in bread, pasta,  
and savory tarts*

In a bowl mix together the oats, seeds, seaweeds, salt, and baking powder. Add water and mix well until the dough becomes sticky. Divide the dough into two and place one part on a piece of baking paper. On top of the dough add another piece of baking paper and roll the dough out evenly and as thinly as possible between the two. With a knife or pizza wheel cut the top baking paper and divide the dough into squares without cutting through the bottom paper. Remove the top baking paper and place the dough and the bottom paper on a baking sheet. Repeat the procedure with the other part of the dough. Bake the crispbread at 200°C for about 15–20 minutes until the bread is golden brown. Let the crispbread cool on a baking rack. After a few minutes the crispbread can be broken along the scored lines.



◀ Crispbread with seaweeds.



## Seaweeds in gastronomy

### SEAWEED INNOVATIONS AND HAUTE CUISINE

In the foregoing part of this chapter I have tried to demonstrate the many simple ways in which seaweeds can be incorporated into everyday cooking, using recipes that anyone can follow to enhance and add flavor to a variety of familiar dishes. Almost without exception, the underlying idea is to encourage the reader to introduce seaweeds incrementally into the everyday diet and to pave the way, over time, for his or her own discoveries of how to reap the nutritional benefits they contain.

As we set out to do so, we can turn for inspiration to the greater prominence that has been given to marine algae during the last few years by many serious practitioners of *haute cuisine*. This has, to a certain extent, been driven by a felicitous combination of factors: the locavore movement, a heightened consciousness of the importance of sustainable food sources, the quest for *terroir*, and the desirability of eating healthy, pesticide-free foods. While the ways in which innovative chefs use seaweeds in elaborate gourmet meals probably lie well beyond our capacity to reproduce them for ourselves at home, it is worth delving a little deeper into what happens behind the scenes in the kitchens of some of the finest restaurants.

### NEW RAW MATERIALS OPEN NEW GASTRONOMIC PATHWAYS

For the professional chef, the challenge of how to use raw materials is on a completely different plane from the one we face at home. Like art and the search for new knowledge, gastronomy is driven by a combination of craft, desire for renewal, self-criticism, vision, and delight in playing with new ingredients and ideas. Here, the goal is to invent fabulous new dishes, where seaweeds have been incorporated as essential, and often surprising, elements, which elevate the resulting creation to something unique and, possibly, sublime. Something that calls out for both sensory and esthetic appreciation.

For most chefs in Europe and North America seaweeds are a relative novelty. This challenges them to rework traditional recipes in daring ways and to devise pioneering gastronomic experiences. Some have drawn inspiration from classical Asian cuisine, where seaweeds have never fallen out of favor. Other well-known chefs have embraced the use of seaweeds in their kitchens and restaurants in order to capitalize on the profusion of tastes, textures, shapes, and colors that are characteristic of marine algae. Often this involves

*Seaweeds in gastronomy*



## Fresh shrimp with pickled sea lettuce and beach herbs

serves 4

### Seaweeds in the kitchen

Chef René Redzepi, a pioneer of the New Nordic Cuisine, is very preoccupied with finding regional raw materials for his kitchen at Restaurant noma in Copenhagen. He expresses his philosophy as follows: “In an effort to shape our way of cooking, we look to our landscape and delve into our ingredients and culture, hoping to rediscover our history and shape our future.” The restaurant has been spearheading the rediscovery of *terroir* in the Nordic cuisine. Lately, René has developed an interest in using seaweeds from different places in the northern countries. He thinks that seaweeds will come to play a major role in the gastronomy of the future and that there is a real need to make them available locally.

In this recipe, René combines ingredients from three biological kingdoms: shellfish (shrimp) from the ocean, seaweed (sea lettuce) from the waters of the coastline, and herbs (stonecrop) from the beach.

- ⚡ Carefully remove the shells from 20 fresh deep-water shrimp starting at the tail end and working towards the head. Line the shrimp up on a plate and keep them cool on ice.
- ⚡ Rinse 50g of fresh sea lettuce very thoroughly to free it from sand. Cut baking paper into 4 circles, 13 cm in diameter. Pickle the sea lettuce by rinsing it again in a mixture of 45ml vinegar and 90ml water. Spread it out on the baking paper circles, making sure it fully covers each surface without being stacked in several layers.
- ⚡ Peel one rhubarb stem and dice finely. Cook the pieces *sous vide* for 6 minutes with 50g of a stock syrup made of 50% water and 50% sugar. Strain the rhubarb, mix the pieces with grapeseed oil, and season with salt before serving.
- ⚡ Make a rhubarb juice by mixing 110g rhubarb juice, 80g beet juice, 50g balsamic apple vinegar, and 50g stock syrup. Strain the juice.
- ⚡ Put 16 small stonecrop leaves, 24 small sea purslane leaves, and 24 small beach mustard leaves in ice water and then spin them dry. Keep them in the refrigerator until needed.
- ⚡ *To serve:* Take cold plates from the refrigerator in the last instant before serving. Season the shrimp, arrange on plates, and cover with the sheets of pickled seaweed. Dress with the diced rhubarb, the beach herbs, and a few spoonfuls of the juice.

►► Fresh shrimp with pickled sea lettuce and beach herbs.

