



Ingredient Characterization

What Culinary, Nutrition, and R&D Professionals Say about Alaska Oysters

PRODUCT

Growing the market for Alaska oysters
2024



Product | Resources Hub

Food for Climate League developed **three resources** in order to:

- Understand the culinary potential of Alaska oyster varieties,
- Map the existing oyster products in the market, and
- Identify the most promising applications for Alaska oysters in CPG and foodservice



INGREDIENT CHARACTERIZATION | What Culinary, Nutrition, and R&D Professionals Say about Alaska Oysters

LANDSCAPE | Existing applications of Oysters in the U.S. and Globally

APPLICATIONS | Most Promising B2C Applications for Alaska Oysters in CPG and Foodservice



**What culinary, nutritional,
and processing insights
have experts provided
about Alaska oysters?**

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This deck is part of a broader suite of resources that supports the [Alaska Oyster Food Roadmap](#).

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1 Executive Summary



Pacific oysters are the only oyster currently cultivated in Alaska. They have the following sensory, nutritional, processing characteristics:



Sensory

Alaska oysters are more approachable, as they are milder and smaller than other U.S. varieties.

Consumers perceived them as higher quality due to the strong connection between Alaska's pristine waters and freshness/taste.



Nutritional

High-quality protein, excellent source of zinc, B12, iron and Omega-3.



Processing

Evaluate using high-pressure processing for mechanical shucking.

2 Culinary Observations from Chefs and Eaters: Sensory Highlights



EXPERT ASSESSMENT¹

Chef Maylin Chávez

Co-owner of Nagar Oysters. Pop-up & Catering, former chef at Blue Evolution

Oysters analyzed

Farmed 4-5 years

Hump Island Oysters. Grown in Ketchikan at one of the most pristine and northernmost oyster farms in the world.

- **Approachable oysters** for first time oyster eaters, easy to shuck. **Mild in flavor** and mid-salinity. Vegetable notes like cucumber, umami note, and poached pear aroma.
- **Sweeter and less briny** than the Eastern oyster
- **Small crisp bellies**, juicy and firm but soft on the palette
- **Shell is a bit brittle**, conducive to a suspended grown oyster.
- **Size:** small - 2.75-3.25 inches

CONSUMER PERCEPTION OF ALASKA OYSTERS²

- Mild in flavor
- Larger than oysters in the Lower 48
- Higher quality and fresher than oysters in the Lower 48

"Large oysters caught in cold bays"

DScout Mission | Alaska Visitor

"I imagine them to be bigger and whiter in color."

JDScout Mission | Global Citizen

"They have a more mild flavor than the Eastern oyster or the Atlantic oyster."

DScout Mission | Global Citizen

"When I think about Alaska oysters I think of fresh, delicious, safe to eat, and a treat"

DScout Mission | Frequent Seafood Eater

3 Nutritional Observations by Nutrition Experts at Food + Planet

Nutritional Composition

Nutritional Highlights:

- High-quality **protein**
- One of the best dietary sources of **zinc (519% DV)** - crucial for immune function.
- Excellent sources of **vitamin B12 (327% DV*)** - important for red blood cell formation and brain health; **iron (27% DV)** - necessary for oxygen transportation and energy levels; and **Omega-3 (0.31 g EPA+DHA)** - cardiovascular health, reduce cholesterol, and anti-inflammatory

Other Relevant Nutrients:

- **High in selenium (38% DV) and iodine (62% DV)** - antioxidant and thyroid function; and a good source of choline (14% DV)
- DHMBA: Antioxidant

Other Nutritional Applications

Powdered shell: calcium supplement because it has a high density of calcium carbonate – *There is not enough evidence to determine if this high-concentration format is safe to eat.*

Note: Producers can leverage this nutritional information to craft compelling brand messages, highlighting the health benefits of oysters to attract health-conscious consumers and differentiate their products in the market.

FCL Interviews with Industry Experts, 2024

Suggested Weekly Intake per Person

3 oz/85 g 2-3 oysters*
2 Times/week



4 Processing Observations from R&D Experts | High Pressure Processing as An Alternative to Mechanical Shucking

Investing in **High Pressure Processing (HPP)** or finding a co-packer with this technology could be a strategy to overcome labor intensive shucking while enhancing food safety, extending shelf life, and preserving their nutritional value.

Benefits of HPP:

Reduces labor cost and maximized yield by mechanical shucking. Using pressure between 2000-3500 bar, opens the shell of bivalve, and allows for meat extraction without applying heat.

Worth the value: HPP would require a significant initial investment but yields high returns. There appears to be infrastructure in the U.S. (5-10 facilities) currently running HPP for oyster shucking.

Food safety: inactivates pathogens including *Vibrio parahaemolyticus*.

Preserves nutritional and sensory properties since no heat is applied.

FCL Interviews with Industry Experts 2024.

For more information: [Check our extended file](#).



5 APPROACH

How Food for Climate League (FCL) Characterized the Alaska Kelp Species

SOURCES

1 Chef:

Chef Maylin

Food + Planet

1 operations expert: Doug Beacom

4 B2B expert interviews

80+ scientific articles

Find the full bibliography: [here](#)

Compiled secondary research to evaluate the potential of Alaska oysters, focusing on their sensory attributes, culinary properties, functional and technological aspects, and processing observations.

Conducted interviews with B2B R&D experts and chefs.

Designed comprehensive characterization guidelines for chefs' assessments of the ingredients.

Analyzed results from primary data and compared the three species to understand their unique potential.

THANK YOU!

Questions? Please contact us at:
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Visit the [Southeast Conference website](#) to access the Roadmap Resources Hub