



FISHEXTEND

Edible coating



DEPARTMENT OF CHEMICAL
AND BIOPROCESS ENGINEERING



INDUSTRIAL SECTOR
FOOD INDUSTRY



DEVELOPMENT LEVEL
TRL 6

PROBLEM



The fishing and fresh-food industries face the challenge of short product shelf life. For fresh salmon, Chile's main export, this restricts access to distant markets, causes economic losses, and increases waste throughout the logistics chain. The short sales window before expiration leads to discounts, clearance sales, and loss of value, in addition to waste caused by microbiological spoilage. The problem affects salmon producers, fish exporters, fresh-food processors, distributors, retailers, and producers of other meats such as pork, poultry, and beef. Current solutions - refrigeration, modified atmospheres, and preservatives - have limitations in effectiveness, cost, sustainability, or sensory impact.

SOLUTION



FishExtend® is an edible coating made from 100% natural ingredients and applied by spraying it onto fresh fish and meat. It forms an invisible protective layer that releases bioactive compounds with antimicrobial and antioxidant activity, killing and slowing the growth of microorganisms responsible for spoilage. At the same time, it preserves key product attributes such as color, texture, flavor, pH, and overall quality. Through this protection, FishExtend® extends the shelf life of fresh foods without altering their organoleptic properties, facilitating storage, transportation, and commercialization.

MERCADO



The target market comprises industries that need to extend the shelf life of high-value fresh foods: salmon producers; producers and exporters of fish and seafood; fresh-meat processors; refrigerated-food companies; retailers; and export-logistics operators. Its main applications include fresh salmon, fish and seafood, pork, poultry, beef, and other perishable foods. Chile accounts for approximately 30% of the global salmonid market and exported more than US\$6.549 MM in 2025, giving FishExtend® strong potential for national and international impact.



Professor(s)
Loreto Valenzuela, Ricardo
Pérez and Wendy Franco

Intellectual property
National and international
patent granted.

Development status
TRL 6: validated in a simulated
environment.

ADVANTAGES



Formulated using
ingredients of natural
origin.



Controls microorganism
growth and delaying
spoilage processes



Provides prolonged
protection through the
gradual release of
bioactive compounds.



Maintains the color,
texture, flavor, and
overall quality of fresh
foods.