

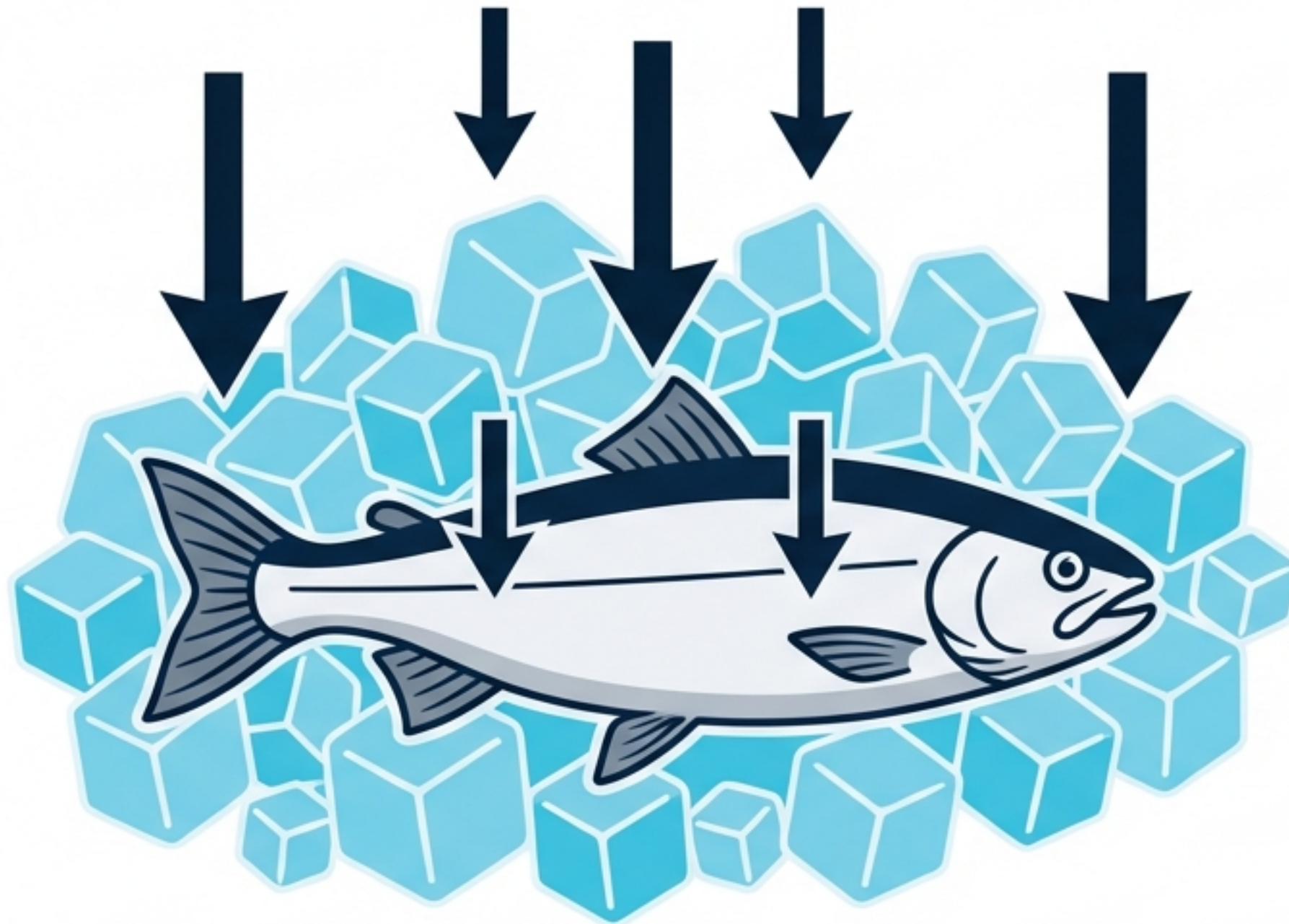


# The Invisible Shield

Biomimetic Preservation for Premium Seafood Export

# The Hidden Cost of Brute-Force Cooling

For decades, global seafood logistics have relied on a fundamentally flawed preservation method: direct contact with melting ice. While it lowers temperature, it actively degrades the product.



## Osmotic Damage (Drip Loss)

Melting freshwater creates an osmotic imbalance, drawing out cellular moisture, umami, and causing up to 20% weight loss.



## Dead Weight

Ice adds up to 50% to the total shipping weight, drastically reducing actual payload capacity.

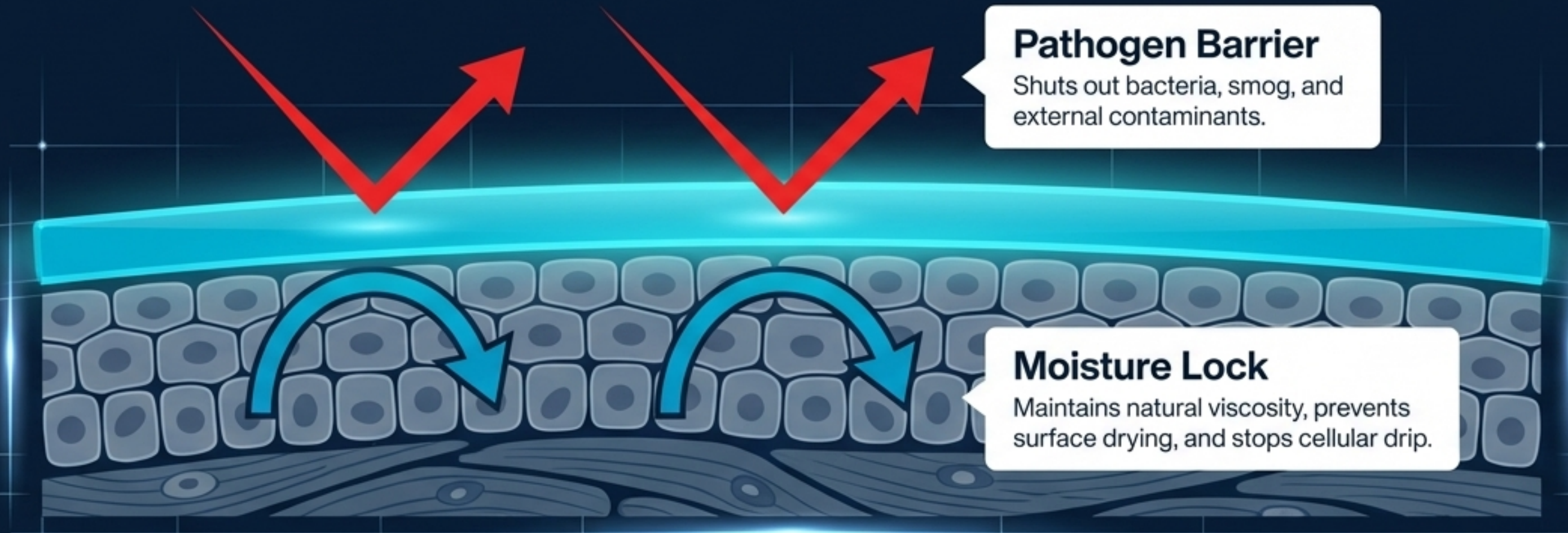


## Surface Vulnerability

As ice shifts and melts, the fish's surface is exposed to air, leading to drying, discoloration, and bacterial proliferation.

# Restoring the Natural Biological Shield

ProFish is a natural, food-safe solution formulated from carefully selected raw materials. It does **not replace cooling**; it acts as a high-performance freshness retention coating that mimics the fish's natural protective mucous membrane.



## Pathogen Barrier

Shuts out bacteria, smog, and external contaminants.

## Moisture Lock

Maintains natural viscosity, prevents surface drying, and stops cellular drip.



## Food Safety

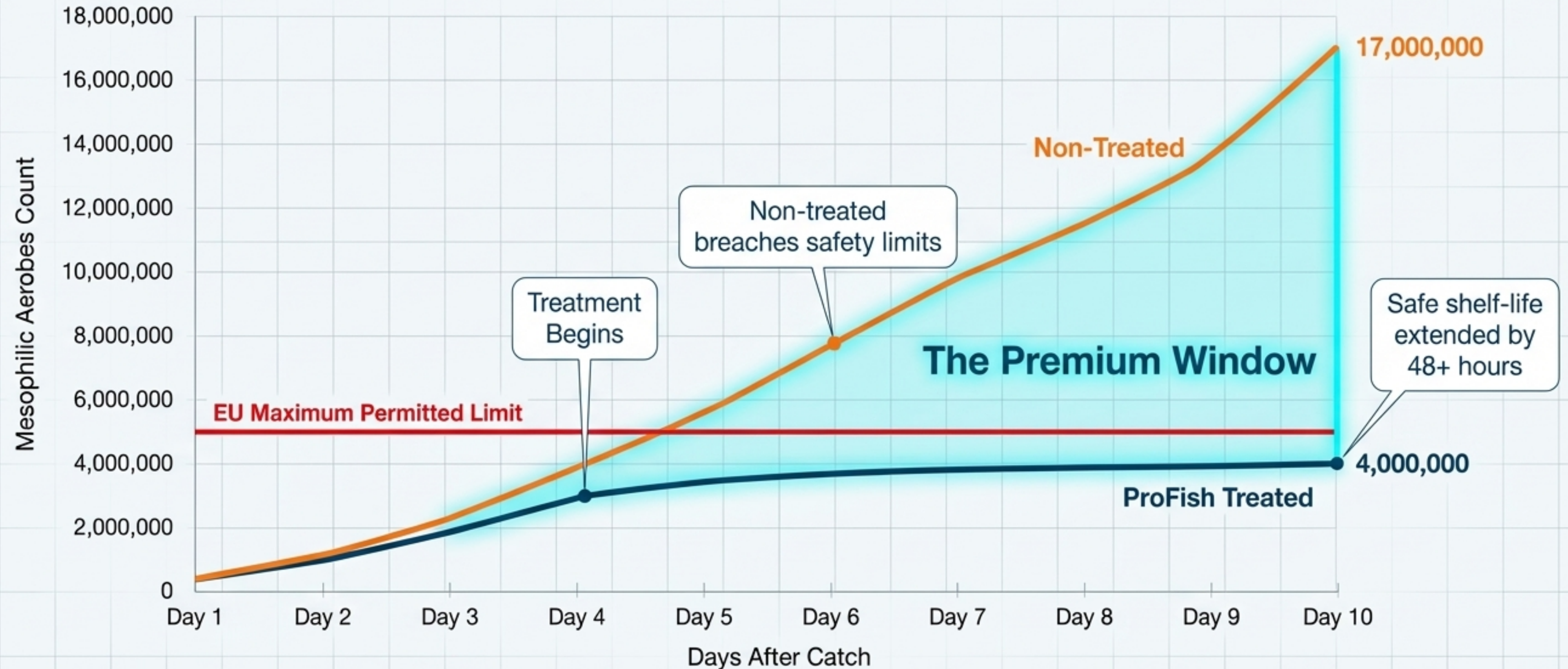
Ensures absolute safety for the end consumer.

# The Temperature-Activated Phase Shift



# Empirical Proof: Suppressing Pathogen Proliferation

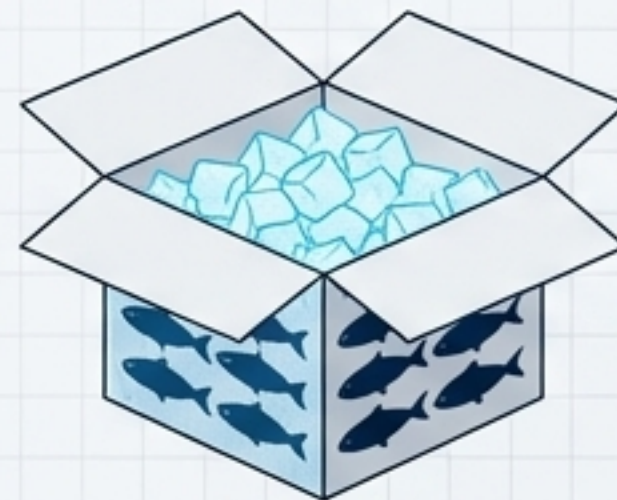
Certified laboratory testing on Branzino confirms that ProFish fundamentally alters the bacterial growth curve.



# The Yield & Capacity Multiplier

The Preservation Matrix	Traditional Ice	ProFish
Weight Added (Shipping Penalty)	~50%	~0%
Drip Loss (Cellular & Umami Damage)	Up to 20%	Max 4%
Usage Volume	Massive	Ultra-low: 0.55ml – 0.95ml per 1.5kg-3.0kg fish
Estimated Cost per Fish	Variable / High	1.98 JPY – 3.42 JPY

Yield & Capacity



Ice

+100% Payload Capacity



ProFish

**The Insight:** By replacing heavy ice with a microscopic gel layer, exporters simultaneously increase their physical shipping capacity and retain the biological yield (weight and flavor) of the fish.

# The Premium Export Playbook



## Target 1: Yellowtail



**The Market:** Surging demand in US and Southeast Asia.



**The Requirement:** Strong market preference for non-frozen, chilled transport.



**The Threat:** Surface drying and discoloration immediately destroy unit pricing.



## Target 2: Tuna



**The Market:** Ultra-high unit price, luxury dining sector.



**The Requirement:** Exclusive reliance on rapid, chilled air-freight.

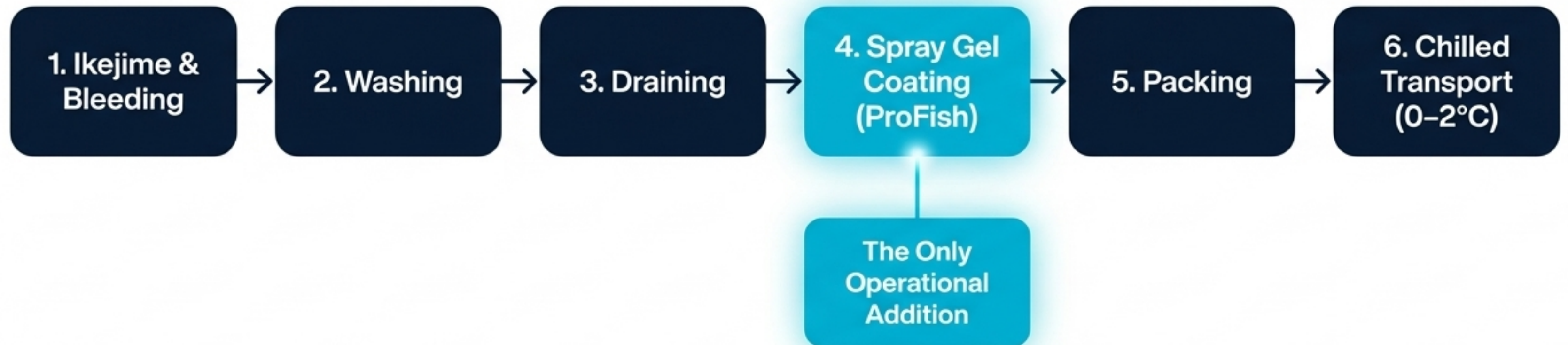


**The Threat:** Drip loss and discoloration are fatal to the product's viability.

**Takeaway:** In both markets, a fraction of a percent in quality degradation results in massive profit loss. ProFish is the insurance policy.

# Frictionless Operational Integration

Designed specifically for whole-fish processing. A single, seamless addition to standard export operations.



**Note:** Immersion or soaking methods are not required or recommended.

# Optimizing the Cold Chain: Packing Configurations

## The Export Logistics Matrix

Recommended Sweet Spot

	Configuration 1: Full Ice	Configuration 2: ProFish + Full PCM	Configuration 3: <b>THE HYBRID</b> (ProFish + Small Ice + Small PCM in EPS Box)
Cost per Box	~100 JPY/box	1000–4000 JPY/box	500–1500 JPY/box
Quality & Stability	△ (Fluctuates, high drip)	◎ (Perfect, locks at 5°C)	◎ (Exceptional ROI)
Primary Use Case	Legacy systems.	Long-haul (48–72h), ultra-premium brands.	The optimal balance. Low operational friction, maximum freshness retention.

# The Synthesis: Creating a New Market Category

## Science

Halting bacterial growth and cellular drip loss at the molecular level.

**ProFish is not just a replacement for ice. It is the technological enabler of the '48-Hour Premium Export Brand'.**

## Logistics

Achieving Non-Ice Chilled Transport to unlock massive freight capacity.

## Profit

Guaranteeing sashimi-grade quality upon arrival to command luxury pricing.

# The High-Margin Engine: Localized Japanese Production

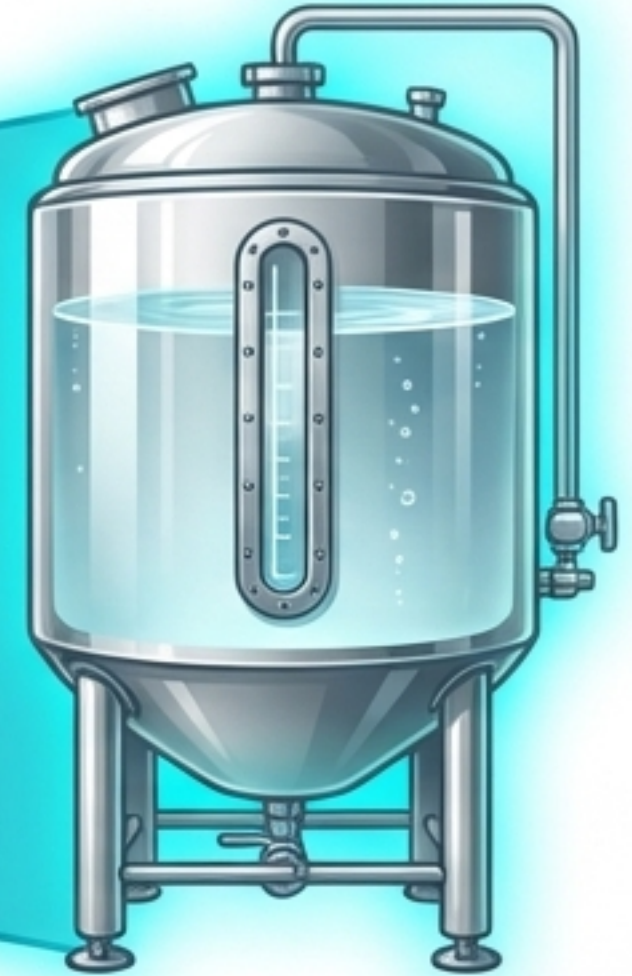
The ProFish business model eliminates the primary bottleneck of global liquid logistics: shipping water.

## The 300g to 30L Multiplier



**300g Raw Solid Material**  
(Imported from Italy)

**100x Volume Multiplier**



**30 Liters Active Liquid**  
(Produced Locally in Japan)

Massive reduction in raw material shipping costs.

Exponential profit margin per liter.

Drastically reduced delivery lead times for domestic clients.

# Minimal Infrastructure, Maximum Output

Localized production requires exceptionally low initial capital expenditure.

## 1. Preparation

Heat 30L of standard water to 70°C.



## 2. Agitation

Mix in 300g of ProFish solid raw material.  
(Example: Standard 1000L steam jacket stirring tank).



## 3. Bottling

Direct packaging and distribution to Japanese fisheries and exporters.



## Secure the Global Standard in Seafood Preservation

### Value Summary

- ✓ **Zero Ice Weight Penalty**
- ✓ **48-Hour Extended Sashimi Quality**
- ✓ **Localized, High-Margin Production**

### Global Contacts

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