

Lyoflora FP-50

Natural Protection, Proven Safety: Controlling *Listeria monocytogenes*

Cultures with Protective Effects for salt-injected and fresh salmon fillets

EU legislation controlling the presence of *Listeria monocytogenes* in ready-to-eat foods are tightening, with 2026 updates emphasizing full shelf life compliance and continuous safety control—making proactive solutions more critical than ever.

Natural protection to keep salmon safe, fresh, and of high quality

Carnobacterium-based protective cultures deliver strong inhibition of *Listeria monocytogenes* and spoilage microorganisms, helping to maintain product stability throughout storage.

These cultures grow rapidly in salmon and show reliable technological performance, **without producing off-odours or biogenic amines**, ensuring a clean and appealing sensory profile.

When combined with standard preservation methods such as vacuum packaging, *Carnobacterium* spp. support **extended shelf life and enhanced product safety, in a natural way.**

Lyoflora FP-50 is a **culture with protective effect** designed to inhibit *L. monocytogenes* in **meat and fish products**. It is a specialised microbial solution aimed to enhance food safety.

FP-50 belongs to a group of cultures that incorporate selected ***Carnobacterium* strains**, known for strong **antilisterial activity** through:

- **Bacteriocin production**, especially peptides active against *Listeria monocytogenes*.
- **Competitive exclusion**, preventing pathogen growth on / in the product.

4PROTECTION
Food Cultures with Protective Effect

Key Features



Targeted *Listeria*
Control



Natural, clean-label
solution



Product identity
preserved

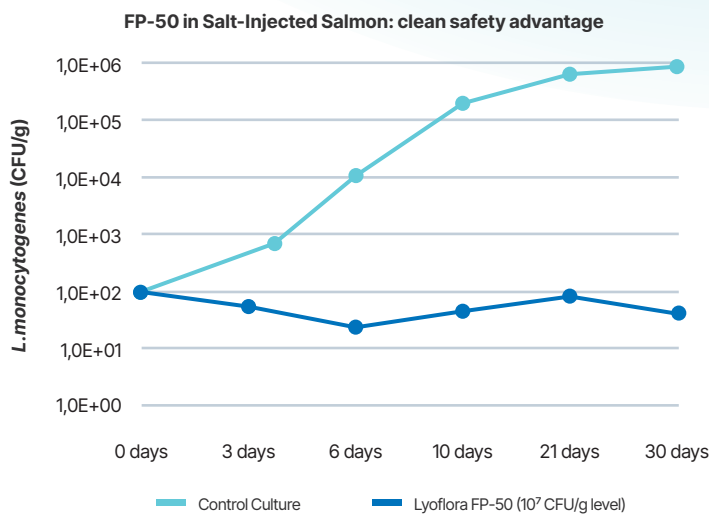


Seamless process
integration

Protecting Salt-Injected Salmon: Enhanced Listeria Inhibition from Processing to Shelf Life

Throughout the entire analysis period, FP-50 consistently maintained *L. monocytogenes* at significantly lower levels, demonstrating its effectiveness as a natural, high-performance solution for enhancing the safety of vacuum-packed injected salmon products.

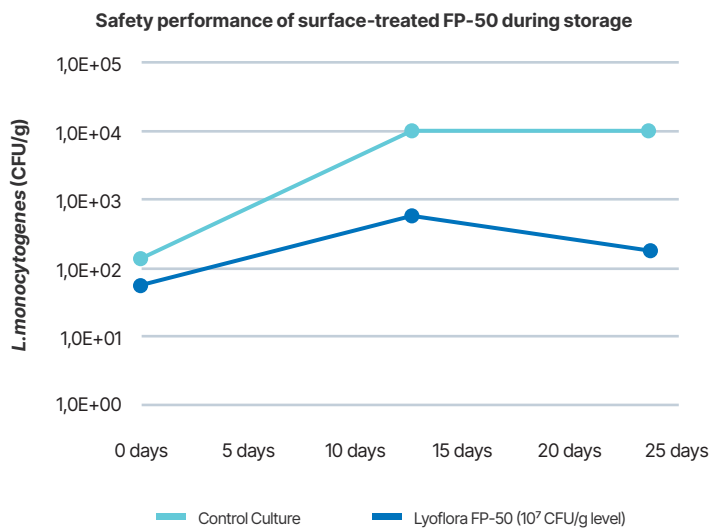
By delivering powerful inhibition, FP-50 keeps growth rates below regulatory limits for ready-to-eat (RTE) foods.



Protecting Salmon Fillets: Effective Listeria Control from Surface Treatment to Storage

After maturation (48 h, 7 °C), FP-50-treated salmon exhibited higher total cell counts compared to reference samples (no cultures). This increase reflects the growth of beneficial *Carnobacterium* strains, which are directly associated with improved inhibition of *Listeria* throughout storage.

The graph demonstrates that FP-50 significantly limits *L. monocytogenes* growth in vacuum-packed salmon, when compared to the reference sample.



Challenge studies were performed in accordance with accredited methods and internationally recognized guidelines for *Listeria monocytogenes*, ISO 11290-1 and ISO 11290-2, guaranteeing robust and comparable results across ready-to-eat food applications.

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