



milarex

NEWS

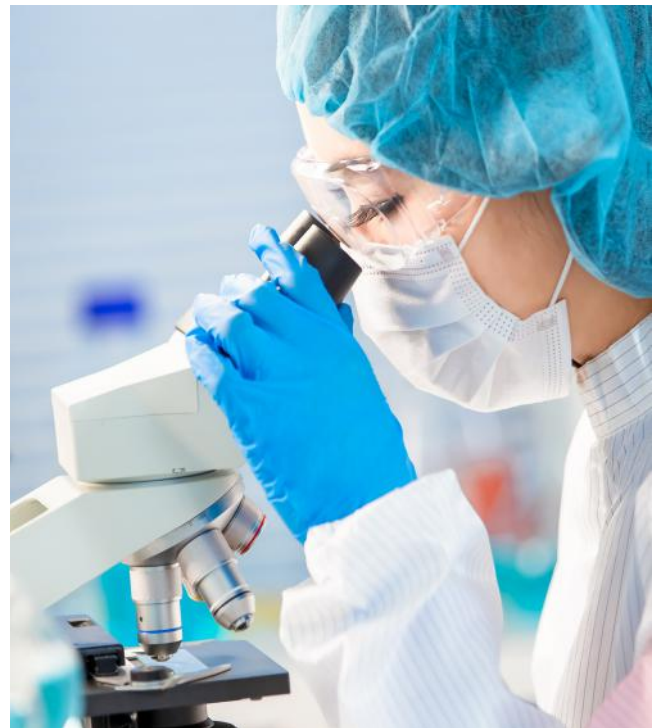
December, 2020

Zero listeria mindset food safety is our culture

All consumers deserve a healthy, tasty and safe food experience. We believe in openness about approach and results on food safety as the basis for trust.

Pathogens are all around us in our daily lives. Seafood as well as other fresh food products are exposed to listeria and other pathogens, and salmonids are susceptible to infection. In Milarex we are prepared, and strict procedures are in place to constrain and resolve such issues. The regulation from the EC (European Commission) calls for zero listeria in finished products.

Every day our skilled teams are assessing risks and looking for ways to improve. It has become a culture and part of our DNA. The more we test, the deeper our understanding will be about connections between listeria risks and effective fighting listeria sources. Our quality products are made in our new factory and every step is monitored closely by our experienced quality control staff. Our own modern in-house laboratory tests all steps in the production to secure quick results and a rapid response time. Despite pathogen issues with raw materials, we constrain and control listeria, and detections in ready products are very limited and infrequent. Unsafe products are not distributed to the market.



Consumers expect the food they eat to be safe. We are all consumers, and we care about the well-being of our loved ones. Food-borne bacteria can cause severe consequences and this understanding needs to be the backbone of any food producing company's culture and it's fundamental to how Milarex operate its business. We aim to achieve a close and informed dialogue with food safety specialists among both customer and suppliers in order to further strengthen food safety in the salmon category.

Milarex food safety building blocks

- **Food safety culture - Zero listeria mindset**

We carry out continuous and proactive risk assessments based on a set of well-established test procedures – when, where and how.

- **Skilled, experienced and passionate employees**

We are attracting and recruiting the right people and skills - knowledgeable, experienced with a “can do” attitude.

- **Professional production planning**

We reduce the risk of quality deviations in raw materials through extensive quality control. Structured and timely cross department production planning is crucial to contain potential issues.

- **Cutting edge production equipment**

We operate our factory with the most modern production methods available in our industry. Unique production equipment is developed internally by experienced industry professionals for industry leading efficiency and hygiene.

- **Modern internal laboratory**

We have an internal, top equipped laboratory with skilled and dedicated specialists that every day are monitoring the quality and testing the food safety Milarex is known for.

- **Packing station risk assessment**

We have strong relationships with our selected suppliers. A Milarex food safety procedure is implemented and all incoming raw materials are extensively controlled.

- **Minimal use of product additives**

With high testing frequency and focus on solving the causes of pathogen problems and not only the symptoms, we see the use of product additives to reduce listeria growth as unnecessary.

Following HACCP principles

We are proactively monitoring our ability to daily deliver on the 7 main principles in the HACCP standard. Continuously risk assessing all 4 major food hazards (microbiological, chemical, physical and allergens) and building on a robust improvement process.



Our methods

Our food safety methods are all based on the HACCP principles. We have set up a system for monitoring, testing and corrective actions.

The method is built on Milarex raw material specifications, experienced employees, historic data sets and extensive testing. All raw materials are tested on arrival, all batches produced are tested at different steps of the production and as finished consumer products. We sample and test the production facilities daily. If we have a positive listeria test result, we

have clearly defined corrective actions based on the stage of production. This can be measures such as: structured production planning, re-routing raw material or semi-finished products into alternative products, heat treatment or even destruction.

“ *Our food safety culture is built on our passionate and committed leaders that motivates and guides their teams.*

Ewa Locman – Head of Quality

Our results – and how we use them

More than 165 000 tests are analyzed in our laboratory yearly to exceed the expectations on taste, quality and food safety required from international retail customers and consumers. We believe in openness about testing and results.



Listeria results for incoming raw materials

All batches of raw material delivered to our production facility are tested for different pathogens. Listeria is the main pathogen to screen for in the salmon category. Our expectation is zero listeria on incoming deliveries regardless of specie, country of origin or packing station. As the test results show, our expectations are not met. The number of positive tests of listeria on fish is far too high. Atlantic salmon from Scotland and trout from Norway had the highest relative finding of listeria in 2019. Although this impacts the overall average, the

Species	Origin	2019
		% Positive
Salmon	Norwegian	4,0%
	Organic	4,8%
	Scottish	14,3%
	Icelandic	5,0%
		Average 4,1 %
Trout	Norwegian	12,0%
	Denmark	4,1%
	Poland	0,0%
	Scottish	0,0%
		Average 9,1 %
Sockeye		Average 6,0 %
All species average 7,6 %		

number of positive tests on Atlantic salmon in general is not at an acceptable level. All findings of listeria are addressed with the relevant packing station in accordance with Milarex food safety specifications and an established set of delivery rules. In the event of listeria findings in three deliveries during the last 3 months, the packing station in question will be temporarily suspended. In Milarex we take pride in maintaining low levels of listeria throughout our operations. We see this as a strong indicator of operational excellence, as we believe is also the case with farming companies.

Reoccurring quality differences over time leads to price differences for packing stations that are not meeting expected listeria standards. The cost of maintaining listeria control by limiting the use of raw materials, corrective actions or the need of retracting goods have to be reflected.

As a major processor of salmon, we are open to share our hygiene and food safety knowledge in a joint effort to reduce the level of pathogen positive raw materials in our value chain.

Listeria results for environmental monitoring

Monthly test schedules and procedures are implemented to monitor our internal factory environment. Schedules are followed up with daily tests in various part of the factory.

According to monthly testing schedules - 2019 Year	% Positive
Low risk area - BEFORE PRODUCTION	0,2%
Low risk area - DURING PRODUCTION	1,6%
High risk area - BEFORE PRODUCTION	0,0%
High risk area - DURING PRODUCTION	0,4%
TOTAL	0,5%

Our results – and how we use them

Hygiene and sanitary procedures are key to control the food safety in the production environment. Extensive experience has helped us identifying high risk areas and equipment.

Milarex has developed unique equipment and facility design, own cleaning and disinfection procedures and a dedicated inhouse cleaning team. Our test methods and modern laboratory secure quick test results and rapid response time. All testing is in accordance with HACCP procedures and ISO standards. From time to time, we detect listeria in the environment. We measure our success of our proactive approach in keeping the number of positive tests on a very low level. By openly sharing our test results we aim to create trust and dialogue around our goal, a tasty and safe eating experience.

Listeria results for finish product

At the beginning of shelf life test RTE - 2020 Year	% Positive
Sum - Atlantic, Sockeye, Trout	0,2%

Despite all our testing, hygiene focus and preventive efforts we do have a very small percentage of positive listeria tests on finished products. In such cases, corrective actions are implemented, and no product will leave our factory if it is not considered safe. As a large supplier of RTE (ready to eat) food we are conscious of our responsibility in delivering safe food solutions. In case of a positive result on a listeria test

the product will be blocked and re-tested to rule out any false positive. If confirmed positive in a second test the product will according to strict procedures be re-worked into other usage or destructed. With our zero-listeria mindset we will every day strive to reduce the number of positive findings in any part of our value chain.



Improved food safety starts with openness, therefore we publish our results.

Thomas Farstad – CEO



**For us, food safety is all about behavior.
We believe that food safety culture is a choice you make!**

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