



IN THE BLUE

Salmon Feed Fact Sheet

What is *In the Blue*?

In the Blue is a sustainable aquaculture feed we created jointly with our Norwegian farm partner Kvarøy and feed company BioMar. *In the Blue* uses recycled wild-caught trimmings from fish already bound for human consumption, microalgae and other responsibly sourced ingredients to reduce environmental impact and provide consumers with salmon that contains less contaminants and double the omega-3 content of the industry standard.

Why is fish feed important?

Aquaculture or fish farming, currently provides more than 50% of the world's seafood, and that number will continue to grow. By 2030, the Global Aquaculture Alliance¹ predicts that 62% of all food fish will come from aquaculture. Fish farming is here to stay, making it critical to implement healthy and sustainable aquaculture practices, including improvements in fish feed.

Traditional aquaculture feed relies on wild fish stocks like herring, mackerel and anchovies to supply marine ingredients such as fish oil and meal. Because of overfishing, these wild fish stocks have become increasingly depleted. Traditional feeds can also include high levels of harmful contaminants like mercury and polychlorinated biphenyls (PCBs), or genetically modified (GMO) grains.

We saw an opportunity to make seafood healthier for consumers and for the environment by removing these harmful ingredients from our aquaculture feed. Better feed equals better fish, which is why *In the Blue* only contains ingredients that improve the quality of our salmon and the health of our oceans.

How is *In the Blue* different from other aquaculture feeds?

Unlike traditional feeds, *In the Blue* uses sustainably sourced ingredients like microalgae and upcycled trimmings from fish already bound for human consumption to reduce reliance on wild fish stocks and increase the amount of heart and brain-boosting omega-3 fatty acids in our salmon.

In the Blue is currently the only feed in the industry to use cleaned fish oil — this means we remove harmful contaminants like mercury and PCBs from our feed, resulting in a cleaner salmon.

In the Blue is non-GMO and free from antibiotics, added hormones and synthetic dyes.

Why should you eat seafood?

Seafood is an excellent source of omega-3 fatty acids, linked to heart, brain and overall good health. The latest FDA Dietary Guidelines state that individuals should eat 8 or more ounces of seafood per week to gain health benefits² associated with omega-3 consumption. Despite this recommendation, most Americans aren't consuming enough seafood to provide real benefits. A 2017 study³ shows that eating more seafood could prevent an average of 84,000 deaths each year.



Blue Circle Norwegian Atlantic Salmon in fjords

How many omega-3 fatty acids are in one serving of Blue Circle Foods Norwegian Atlantic Salmon?

One 8oz serving of our salmon contains an average of about 4,100mg (4.1g) of marine (combined EPA & DHA) omega-3 fatty acids.

FDA Dietary Guidelines state that individuals should consume a minimum of 250mg omega-3's per day or 1,750mg per week. That means just one 4oz serving of Blue Circle Foods Norwegian Atlantic Salmon provides your weekly allowance of omega-3's.

What does it mean when we say that Blue Circle Foods Norwegian Atlantic Salmon contains double the omega-3 content?

According to The Norwegian National Institute of Nutrition and Seafood Research, the current industry standard for omega-3 fatty acids in farmed Norwegian Atlantic salmon is approximately 2.5g per 8oz serving⁴. In comparison, Blue Circle Foods Norwegian Atlantic Salmon contains an average of 4.1g omega-3's per serving.


This increase in beneficial omega-3's is due to the use of microalgae in our *In the Blue* feed. This sustainable ingredient boosts omega-3's while reducing environmental impact. We expect the omega-3 content in our salmon to continue to increase as we improve the feed even more.

How much omega-3 content is found in wild Atlantic & Pacific salmon? How does Blue Circle Foods Norwegian Atlantic Salmon compare?

The omega-3 content found in wild salmon (Atlantic & Pacific) varies depending on the species, size and area from which its sourced⁵, making it difficult to accurately determine an industry standard. However, we can confirm that Blue Circle Foods Norwegian Atlantic Salmon contains equal to or higher omega-3 content than the average wild salmon⁵.

Why does Blue Circle Foods Norwegian Atlantic Salmon contain less contaminants than other brands?

While it is impossible to guarantee that any salmon or other food on the market is 100% free from contaminants, Blue Circle Foods' *In the Blue* feed contains cleaned fish oil, effectively removing polychlorinated biphenyls (PCBs), dioxins, heavy metals and other contaminants. It also contains trimmings sourced from producers that meet strict quality and sustainability standards, ensuring that all ingredients are extremely low in contaminants.



The FDA allowable limit for PCBs is 2 ppm, and Blue Circle Foods Norwegian Atlantic Salmon is tested annually by a third-party FDA approved laboratory to ensure it remains well under that number. The most recent results show that Blue Circle Foods Norwegian Atlantic Salmon has a PCB count under .0059ppm.

How does Blue Circle Food's Norwegian Atlantic Salmon remove contaminants from the food chain?

Because Blue Circle Food's Norwegian Atlantic Salmon is only fed clean ingredients and is raised in the pristine waters of the Arctic Ocean, the resulting product contains extremely low levels of marine contaminants. Maintaining this high standard of aquaculture practices ensures the removal of harmful contaminants from the food chain.

What kind of wild-caught trimmings does *In the Blue* feed use?

In the Blue only contains trimmings from producers that meet strict sustainability and quality standards. The current trimmings are sourced from an Marine Stewardship Council certified herring fishery. *In the Blue* reduces waste and maintains record low fish in-fish out ratio (for every pound of fish that *In the Blue* uses, it produces two pounds of salmon) by using off-cuts and trimmings from fish already bound for human consumption.

Why does *In the Blue* contain cleaned fish oil?

Farmed salmon is naturally low in environmental contaminants, and to make our salmon even healthier, we clean the fish oil in used in our feed to remove as many contaminants as possible. The contaminants are then incinerated and destroyed, removing them from the food chain entirely. *In the Blue* is currently the only feed in the industry that contains cleaned fish oil.

How does microalgae improve *In the Blue's* sustainability and omega-3 content?

In the Blue was the first feed in the aquaculture industry to include microalgae as an ingredient, first integrated in late 2016. Microalgae increases *In the Blue's* omega-3 content while improving its sustainability performance by reducing the reliance of fish oil, the traditional source of omega-3s in aquaculture feed.

Microalgae are the origin source of omega-3's in the ocean. The marine omega-3's then slowly move up the food chain as feeder fish are consumed by predators like salmon.

Deriving omega-3's directly from microalgae bypasses this food chain entirely. Unlike fish meal and oil, which are historically derived from wild fish stocks, microalgae is not limited in supply.

By including microalgae, we're making aquaculture feed more sustainable and restoring beneficial omega-3's to the salmon on your plate.

References

- 1 <https://www.aquaculturealliance.org/what-we-do/why-it-matters/>
- 2 <https://health.gov/dietaryguidelines/2015/guidelines/chapter-1/a-closer-look-inside-healthy-eating-patterns/#callout-seafood>
- 3 <https://www.ncbi.nlm.nih.gov/pubmed/28267855>
- 4 <https://nifes.hi.no/wp-content/uploads/2016/12/omega3fattyacidsinnorwegianfarmedsalmon.pdf>
- 5 <https://health.gov/dietaryguidelines/2015-scientific-report/14-appendix-E2/e2-38.asp#figure-anchor-1>