



HEALTHY PETS
HEALTHY FOODS
HEALTHY OCEANS

Introducing Veramaris® Pets EPA & DHA
Omega-3 oil from natural marine algae

 **veramaris®** *pets*

Years of scientific research has helped us understand; EPA & DHA Omega-3 are essential to a life time of pet health.



PETS NEED OMEGA-3 TO STAY HEALTHY

The experts agree; people and pets alike need EPA & DHA Omega-3 for their health. Five decades of scientific research into the health benefits of Omega-3 has shown that this vital nutrient supports the immune system to sustain heart health, eyesight, skin health, and even cognitive and mental health.

And while Omega-3 is essential for pets, they really only need a tiny drop each day, rich in the important nutrients EPA & DHA that, delivered through a variety of pet health products can support a lifetime of good health and wellbeing.

So pets need just a drop every day. But with 470 million dogs and 370 million cats*, that's a lot of Omega-3. Especially if we consider how it's made.

16 MILLION METRIC TONNES OF FISH

The most common source of Omega-3 EPA and DHA is fish oil and fish meal. In 2016, a total of 16 million metric tonnes of wild caught fish were netted to produce fish oil and fish meal, until recently the only source of EPA & DHA. This represents almost 20% of the total global wild fish catch.

And this is now.

In 2050 there will be ...



**10 bn
PEOPLE**



**2 bn
PETS**

All needing Omega-3 to stay healthy.

* Source Statista, Global dog and cat population 2018



Pets need a little
drop of Omega-3
each day

2020

Aquaculture

2.5x



Pet Foods

2.7x



Human Nutrition

3x



2050

DEMAND IS GROWING

With the health benefits of Omega-3 now widely known, the number of applications are growing. Key categories using fish oil are expected to triple by 2050 according to Euromonitor. And so will the demand for Omega-3.

SUPPLY IS DOWN

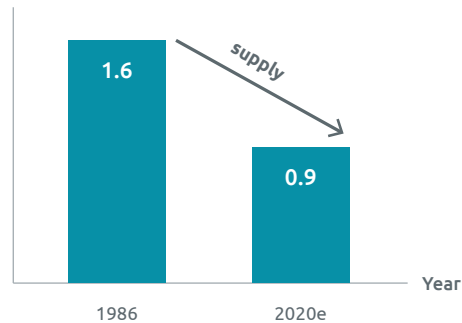
Meanwhile, the supply of fish oil is in decline. Since the mid-1980s, fish oil supply has decreased by almost 50%. Current supply is at maximum levels and gradually reducing. Overfishing and the negative effect of global warming on fish stocks could lead to a further downward spiral in the supply of Omega-3.

UNSTABLE SUPPLY CONDITIONS

Next to this long term perspective, variability in the supply of fish oil is increasing in the short term. Warmer oceans, more frequent and more extreme El Niños contribute to increasing variations in the size of fish stocks. The influx of warmer and less nutrient rich water to the ocean surface means that fish stocks cannot thrive and the population falls.

Fish oil supply

Fish oil in million tonne



Source: FAO, IFFO



Together we need
an ocean of drops...;
and more

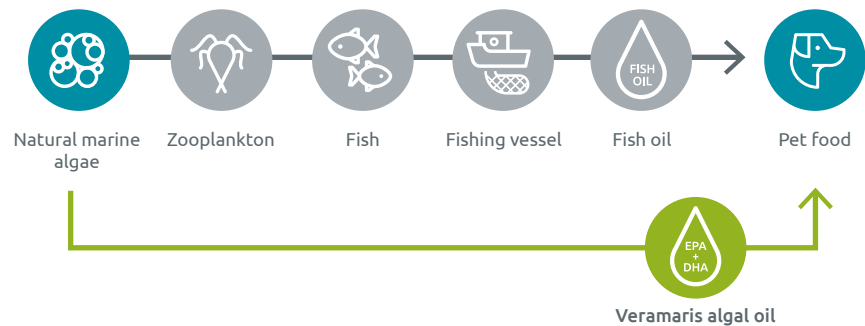
Demand for Omega-3 is
outpacing supply, creating
a need for new sustainable
solutions.



A NEW GENERATION OF OMEGA-3

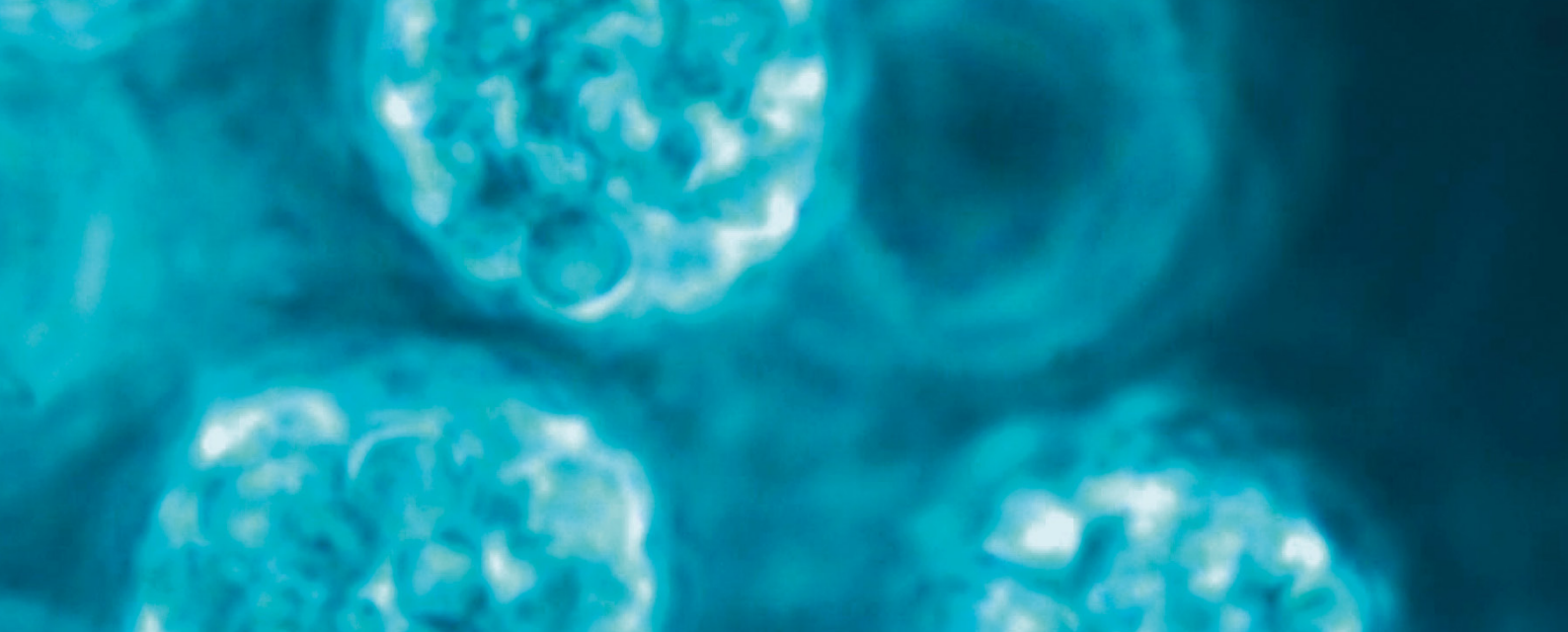
In order to increase the world's access to Omega-3 fatty acids, Veramaris® has developed a new generation of EPA & DHA Omega-3. One that is made directly from the original and richest source of Omega-3 in nature, natural marine microalgae. This way, our Omega-3 is able to shorten the food chain in the ocean.

Skipping over the food chain



Using algae instead of fish allows us to alleviate pressure on marine life – think 16 million metric tonnes of wild fish – and to help preserve biodiversity in the ocean. 1 kg of our Natural Marine Algal Oil, replaces 60 kg of wild catch fish. Or 3,000 anchovies, fish that don't need to be caught anymore for pet food.





A VALIDATED SUSTAINABLE SOLUTION

Our algal oil is a validated sustainable solution. We are actively contributing to the realisation of several United Nations Sustainable Development Goals (SDGs), adopted by the member states in September 2015. They serve as a guiding framework for our sustainability efforts.

By including our Natural Marine Algal Oil in your pet food, our SDG contributions become yours. You can help to conserve wild forage fish stocks by reducing the need to overfish the oceans.



AN INFINITE SOURCE

Sourcing Omega-3 directly from microalgae also allows us to address the shortage in Omega-3 supply. Unlike fish, our algae come from an unlimited source. We don't take them from the ocean. We cultivate and harvest the algae on land, without any waste.

And supply can easily be scaled up to accommodate demand. Currently we are able to provide all the EPA & DHA Omega-3 required by the entire pet food industry, regardless of the size of fish stocks or fish catch. We are already supplying other categories such as farmed fish and livestock.



1 TON

**Veramaris
omega-3 oil**



60 TONS

**wild-caught
fish**

The journey of our Marine Algal Oil began in the 1980s, when NASA asked scientists to solve the challenge of growing food in space, where sustainability is a matter of survival.

They discovered the richness of a tiny micro-organism at the heart of the marine food chain, algae.

LEADING IN ALGAE TECHNOLOGY

Since then, 35 years of intensive R&D efforts have taught us almost everything there is to know about algae. It has made us, Veramaris, the leading company in algae technology.

Based on our proprietary technology, we have developed nutritionally rich algae that we cultivate in a safe and controlled environment. This is how we created our unique Omega-3 rich algal oil.

MADE FROM THE VERY BEST ALGAE

To get there, we researched and studied 6500 different microalgae before we discovered the best of the best. A very special strain of an algæ called *Schizochytrium sp.*, discovered in the North Pacific. It has the advantage of producing Omega-3 fatty acids in high concentrations. The result is an algal oil exceptionally rich in both EPA & DHA Omega-3, a concentration that exceeds 50 %.



How it
started

VERAMARIS PETS, A SUPERIOR SOURCE OF OMEGA-3

> 50% EPA & DHA

Our Natural Marine Algal Oil is made from a special algal strain of *Schizochytrium sp.* The Veramaris algae are naturally rich in EPA & DHA Omega-3. This is how our algal oil is the only one that has both EPA & DHA, delivered in very high concentrations, more than 50%. This is the highest natural concentration of both EPA & DHA available on the market today and double the amount found in most fish oils. And it doesn't vary from batch to batch.

100% NATURAL AND NON-GMO

Our algal oil is sourced from natural (non-GMO) marine algae. Cultivated in a water tank, the only ingredient the algae need as a source of energy to grow, is sugar.

STABLE QUALITY AND FREE FROM OCEAN-BORNE CONTAMINANTS

Our microalgae are cultivated in a 100% controlled and protected environment. They are cultured in closed tanks and further refined in a food grade facility. As a result, our algal oil has a perfectly stable quality. And it is free from the ocean-borne contaminants related to fish oils.



BENEFITS

Benefits for food production:

- No food-process modification
- Reliable supply
- Stable high quality
- Flexibility in food formulation

Benefits for pets:

- Naturally pure
- Contains both EPA & DHA
- Highest natural EPA & DHA concentration available on the market
- Non-GMO product



SECURE SUPPLY

We invested \$200 m to build a state-of-the-art facility in Blair, Nebraska, that opened in July 2019. To guarantee secure supply, besides the scalability of this plant, we have two alternative facilities at different locations.

BETTER PALATABILITY THAN FISH OIL

Sensory tests show that pets prefer the taste of Veramaris® Pets algal oil. Its palatability was measured by Summit Ridge Farms, a US family-owned companion animal nutrition science service that has conducted dog and cat sensory tests for over 35 years. By using commercially available foods, they showed that dry dog and cat food, coated with Veramaris Pets, is preferred to the same food coated with high quality fish oil, commonly used by the pet food industry.



A great drop
for pet food

Pets are family.
That is how most pet
owners look at them.



As true 'pet parents', pet owners want their dogs and cats to have a long and healthy life. As a result they have become much more conscious about what they are feeding their pet and of the role pet food has in addressing health concerns. Premium pet food solutions, high quality ingredients and dietary supplements are all important growth drivers in the pet food market.

OMEGA-3, A VALUABLE NEW ADDITION

In research, the addition of Omega-3 in pet food is seen as new and relevant by consumers and they appreciate the health benefits. And sustainable Omega-3? Consumers love the idea of playing their part and knowing that what they are feeding their pet impacts the marine environment in a positive way.

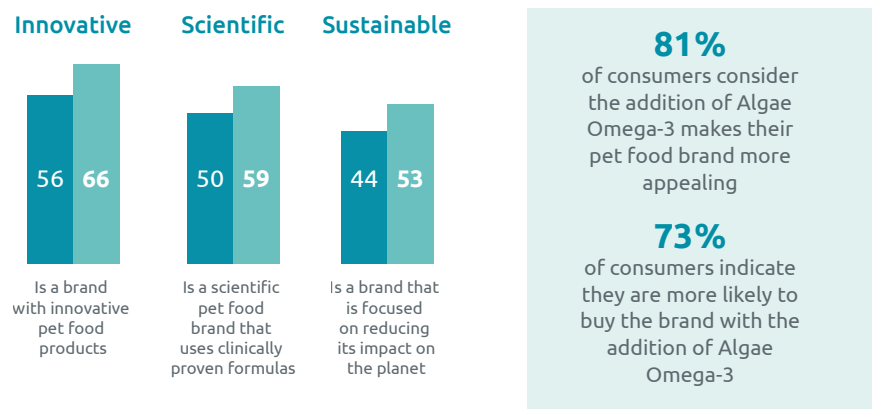
SUSTAINABLE OMEGA-3 POSITIVELY DRIVING BRAND IMAGE

In quantitative research, conducted by INK Research, the effect of adding algae Omega-3 was evaluated on 10 different pet food brands. Significant increases in brand image were measured, particularly in terms of innovativeness, scientific credibility and sustainability credentials.

BRAND IMAGE STATEMENTS

A look at significant changes in consumer perception

How the addition of Algae Omega-3 is improving brand scores*



*Based on % of respondents who ranked 8 – 10 where '10' is completely agree and '1' is completely disagree. Comparison before and after adding the algae Omega-3 concept

Source: INK quantitative consumer research UK, July 2020

The feel-good
little drop



EPA & DHA OMEGA-3, CONTRIBUTING TO A LIFETIME OF PET HEALTH

There is a simple explanation to why EPA & DHA, the two essential Omega-3 fatty acids, are amongst the most researched micro-nutrients in the world supported by more than 37,000 research papers. It is because of the fundamental role they play; they are important to the health of each and every cell. It makes them critical for many of the most important structures and functions. Coming only from seafood, it is challenging for most of us, including our pets, to get enough EPA & DHA in the diet. Scientists therefore investigate specific beneficial effects of bringing both humans and animals back to healthy levels.

Both EPA and DHA serve many roles in the body. Generally speaking, EPA is an important member of the fire brigade for its role in the immune system, whereas DHA is a crucial building block. Both molecules, and EPA in particular, act as input materials for the production of important cell mediators such as eicosanoids, resolvins and protectins. These are critical components of our immune system for regulating and resolving cellular inflammation, which again is important for joint, skin, and coat health.

DHA as a building block keeps cell membranes flexible and permeable. It is also essential for the normal function of the nervous system. DHA is needed for healthy brain and eye development and optimal cognition in dogs and cats. EPA & DHA also contribute to heart and kidney health. In fact, working together and separately, each of these fatty acids provides distinctive health benefits, in every stage of life, contributing to the overall health and wellness of dogs and cats.

Skin and fur health

Omega-3 promotes a healthy skin and coat in dogs and cats

Joint health

Omega-3 supports joint health in dogs and cats



Overall health

Omega-3 promotes overall health in dogs and cats; it provides tissue balance in concert with omega-6 fatty acids



Brain health

Omega-3 supports optimal cognition in dogs and cats

Eye health

Omega-3 promotes the retinal function in puppies and kittens

Heart health

Omega-3 supports heart health in dogs

Kidney health

Omega-3 supports kidney health in dogs and cats



The healthy
little drop

Although Veramaris has used diligent care to ensure that the information provided herein is accurate and up to date, Veramaris makes no representation or warranty of the accuracy, reliability, or completeness of the information. This brochure contains scientific and technical information for business to business use only. Country or region-specific information should also be considered when labeling or advertising to final consumers. This publication does not constitute or provide scientific or medical advice, diagnosis, or treatment and is distributed without warranty of any kind, either expressly or implied. In no event shall Veramaris be liable for any damages arising from the reader's reliance upon, or use of, this information. The reader shall be solely responsible for any interpretation or use of the information contained herein. The content of this document is subject to change without further notice. Please contact your local Veramaris representative for more details. All trademarks mentioned in this brochure are either registered trademarks or trademarks of Veramaris V.O.F. in the Netherlands and/or other countries unless explicitly stated otherwise.

Veramaris V.O.F.
Alexander Fleminglaan 1
2613AX Delft
Netherlands

© 2020 Veramaris®

pets.veramaris.com

