

# High omega-3 fish oil

### What are omega-3 fatty acids?

Omega-3s are essential fatty acids for most mammals, including humans. It is characterized by a double bond on the n-3 position of the fatty acid and it's a main component of fats used by the body for energy and tissue growth.

Omega-3 has many biological functions in the heart, blood vessels, lungs, immune system, nervous system (including brain and eyes) and endocrine system. The three main types of omega-3 fatty acids are alpha-linolenic (ALA), eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA).

Of those, EPA and DHA are most involved in the physiological processes ofmammals. ALA is found mainly in plant oils while DHA and EPA are mostly found in marine oils and algae. ALA can be converted by the body into EPA and DHA, but only in small amounts. Therefore the most beneficial method to ensure sufficient levels of EPA and DHA is by consumption.



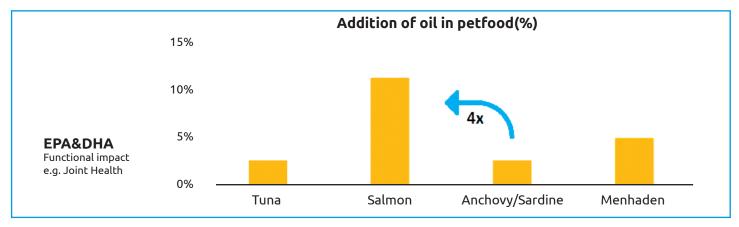
## **Product specifications:**

- Refined and Deodorized Omega 3 Fish Oil is a natural pure triglyceride Feed Grade fish oil, high in Omega 3, deacidified, bleached and deodorized
- Country of origin: Worldwide sourcing, refined in France
- Ingredients: Fish oil (antioxidant on request)
- Packaging: Tank-car, Container, IBC, Drums

- Analytical statistics: F.F.A. (%)
  - Peroxide (mEq/kg)
  - EPA + DHA (%)
  - Sum of Dioxins and furans (ng/kg)
  - Sum of Dioxins, Furans and Dioxin-like PCBs (ng/kg)
  - Non Dioxin-like PCB's (μg/Kg)
- Sensory requirements:
  - Appearance: Liquid at room temperature, color: Yellowish

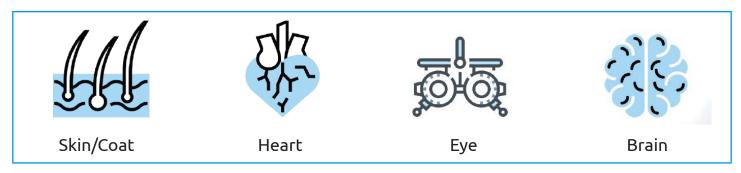
#### What are the benefits?

**Functionality of HIGH omga 3 fish oil versus (farmed) salmon oil.** 4 x times Salmon oil is required in order to reach smilar n3 levels in petfood as with high n3 fish oils!



#### What are the other benefits?

Other benefits reported through the intake of Omega 3 fatty acids in dogs:



## How to use in pet food formulations:

- Fish oil provides excellent opportunities for optimizing pet food with functional levels of EPA and DHA whilst also providing a more economical alternative to salmon or vegetable oils. It would require a much higher dosage of those ingredients to achieve similar levels of EPA and DHA in the body. For example, approximately four times the amount of farmed salmon oil would be required due to the lower amounts of EPA and DHA in farmed salmon. And around three to four times as much ALA based ingredient such as flax oil would be required because of the low conversion rate of around 10% from ALA to EPA.
- According to EU regulation, 3.3 % total omega-3 and 0.38 % EPA is required in order to make a health claim of intended use as a particular nutritional purpose to support the metabolism of the joints in the case of osteoarthritis in dogs and cats. This EPA level can be reached by adding 2.1 to 2.4 % of high n3 fish oil.

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