

**The ORIVO
Certification**

Introduction & Advantages



ORIVO

Evidence-based Transparency

Who are ORIVO?

Established in Norway in 2014.

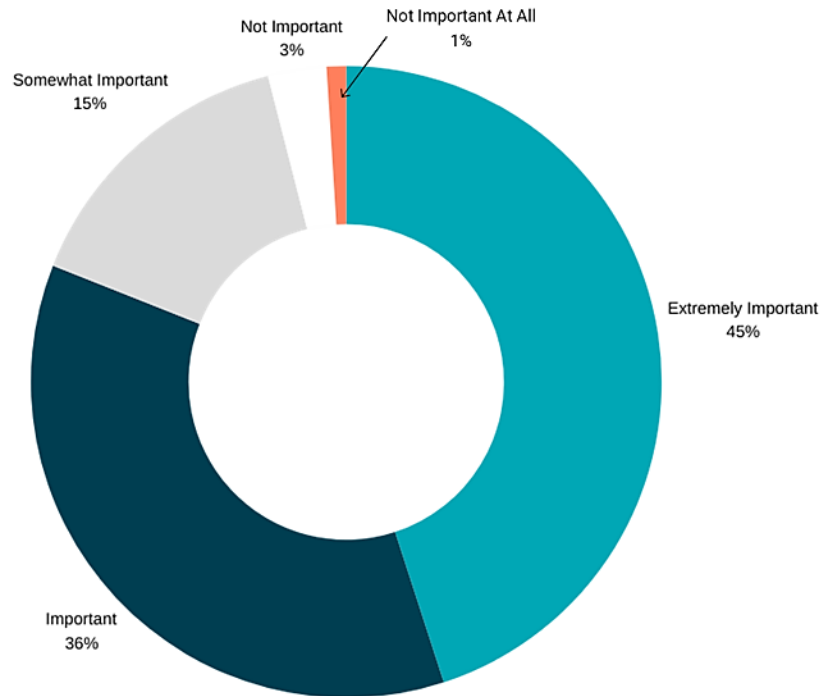
- Independent **3rd party origin verification** of dietary supplements, seafood, pet food and feed ingredients.
- Using **test-based** authentication and advanced laboratory analyses.
- Helping **honest and responsible companies** with a **tool to document transparency and supply chain** – both ingredient producers and brands.



Why ORIVO?

Because consumers demand transparency

- Building **trust and transparency** is a key challenge and a purchase barrier for consumer brands today.
- Consumers are taking a proactive approach to their own health and are **seeking brands they can trust**.



* FMI, Transparency Trends: Omnichannel Grocery Shopping from the Consumer Perspective, 2020



Why ORIVO?

Because fraud in the omega-3 industry is a global challenge

USA/EU



China/SEA



USA (pet supplements)



USA/EU/China



TESTING DETAILS

Tested products: 27
Category: Omega-3 based on krill and salmon raw material
Test period: Jan-16
Markets: USA and EU
Fraud rate: 37 %
Test methodology: NMR fingerprinting (Nuclear magnetic resonance spectroscopy)

TESTING DETAILS

Tested products: 19
Category: Omega-3 based on krill, salmon or cod raw material
Test period: Feb-21
Markets: China and SEA
Fraud rate: 47 %
Test methodology: NMR fingerprinting (Nuclear magnetic resonance spectroscopy)

TESTING DETAILS

Tested products: 15
Category: Wild Alaskan salmon oils
Test period: May 23
Markets: USA
Fraud rate: >80 %
Test methodology: NMR fingerprinting (Nuclear magnetic resonance spectroscopy)

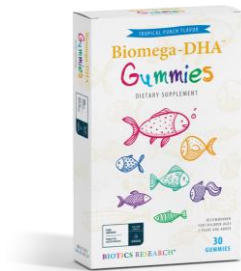
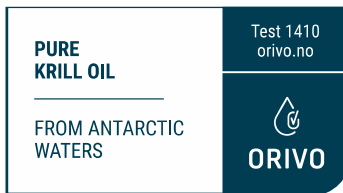
TESTING DETAILS

Tested products: 39
Category: Salmon, krill, seal and cod liver oils.
Test period: May 24
Markets: USA, UK, Germany and China
Fraud rate: 36 %
Test methodology: NMR fingerprinting (Nuclear magnetic resonance spectroscopy)

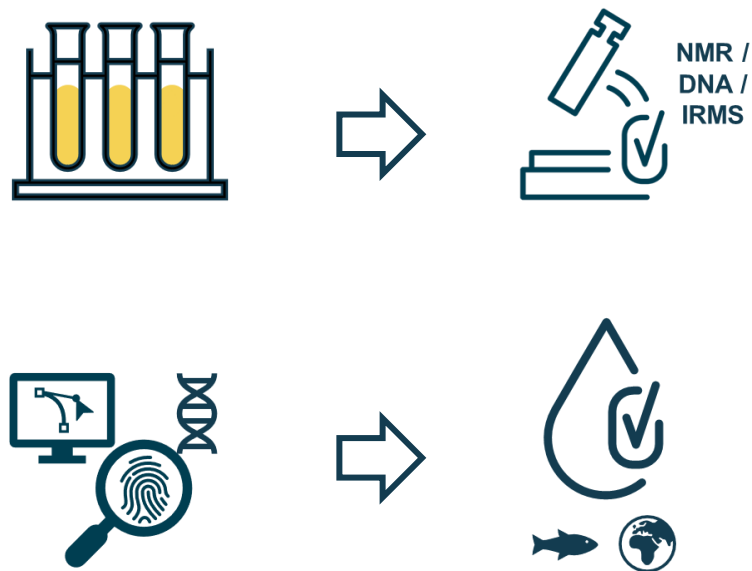


This is ORIVO

Each batch sent to ORIVO for testing:



Always based on revolutionary product testing:



The ORIVO evidence

Revolutionary fingerprinting technologies

- **NMR (Nuclear Magnetic Resonance Spectroscopy):** A technique based on the same principles as MRI, used for lipid-based applications (omega-3 etc.). Superior to traditional methodology (GC) not only confirming fatty acid profile, but can also identify the source(s) (species and geographic origin) through a reference database.
- **NGS (Next Generation Sequencing):** A DNA-based technology for protein-based applications (animal feed, seafood, pet food etc). Superior to traditional methodology (PCR) as it is non targeted (covering a large number of species in a single test) and able to quantify ingredient sources (species) in complex formulations.
- **IRMS (Isotopic Ratio Mass Spectroscopy):** Advanced technology analysing the composition of atoms. Through ORIVO's reference database it is possible to differentiate between properties like: organic vs conventionally farmed salmon, country of origin for farmed salmon, the origin (species/geography) of fish oil concentrates.

Technology developed together with world class R&D partners:



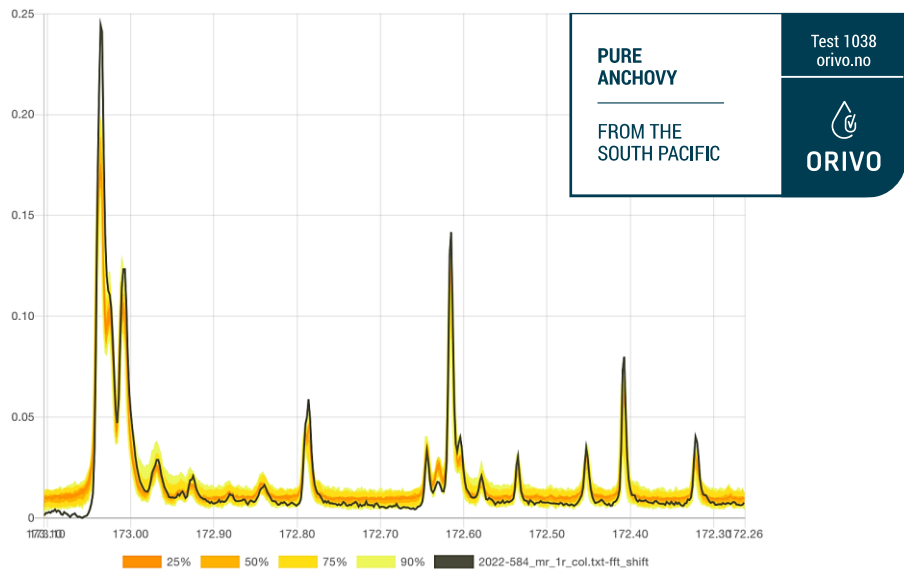
Technology endorsed by leading global industry players:



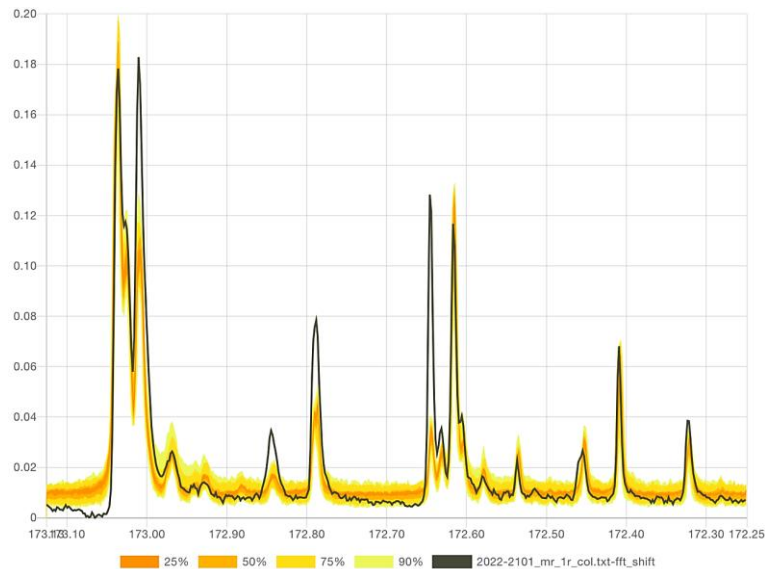
The ORIVO evidence

Revolutionary fingerprinting technologies

A sample (black line) **compliant** with the reference



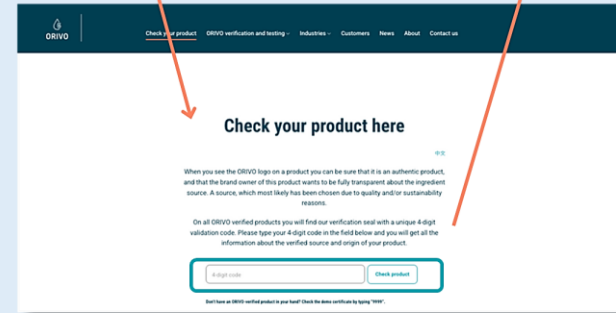
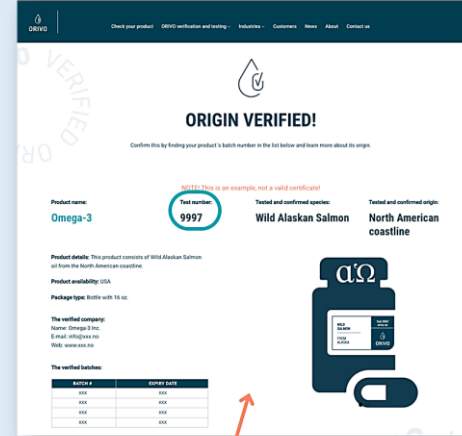
A sample (black line) **non-compliant** with the reference



Providing Transparency

By guaranteeing origin through evidence.

So that consumers can trust what is on the label is actually in the product.



Our Business Segments



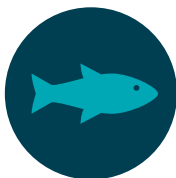
Omega-3 supplements
for humans



Pet
supplements



Bioriginal
Anticipate • Innovate • Grow



Seafood

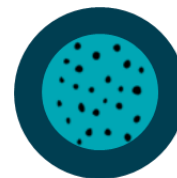


Pet
food

nutrimar

LANDES

FIORDO AUSTRAL
GROUP



Aqua feed





More than just laboratory testing

“ORIVO is a cross-over between a high-tech analytical laboratory, a certification body and a scientific marketing agency.”

- Jonas Törnquist, CEO Natural Pharmaceuticals - Poland

	Laboratory Company	Certification Body	Marketing Agency	 ORIVO
Laboratory testing of products to prove origin and authenticity	✓			✓
Certification program and seal of approval for products		✓		✓
Marketing support and marketing material			✓	✓



Core verification services for omega-3 brands

Services related to testing

- **Laboratory testing**
Advanced product testing applied as the ultimate proof of origin.
- **The extra evidence test**
Analysis of consumer-level samples, purchased incognito by ORIVO.
- **Supply chain verification**
By testing at consumer level the entire supply chain is efficiently verified.
- **Annual certificate of analysis (CoA)**
Annual report of analysed samples with analysis results.



Core verification services for omega-3 brands

Services related to marketing

- **The ORIVO product logo**
The ultimate seal of origin to use on product labels, webpage, promotional material etc.
- **Online certificate**
Consumer oriented. Accessible at ORIVO web-page through unique code from product logo.
- **Pre-made material for consumer promotion**
Template texts/pictures/videos for web, flyers etc. Scientific oriented.
- **Scientific marketing support**
Agreed number of hours of support related to development of marketing material/concepts.

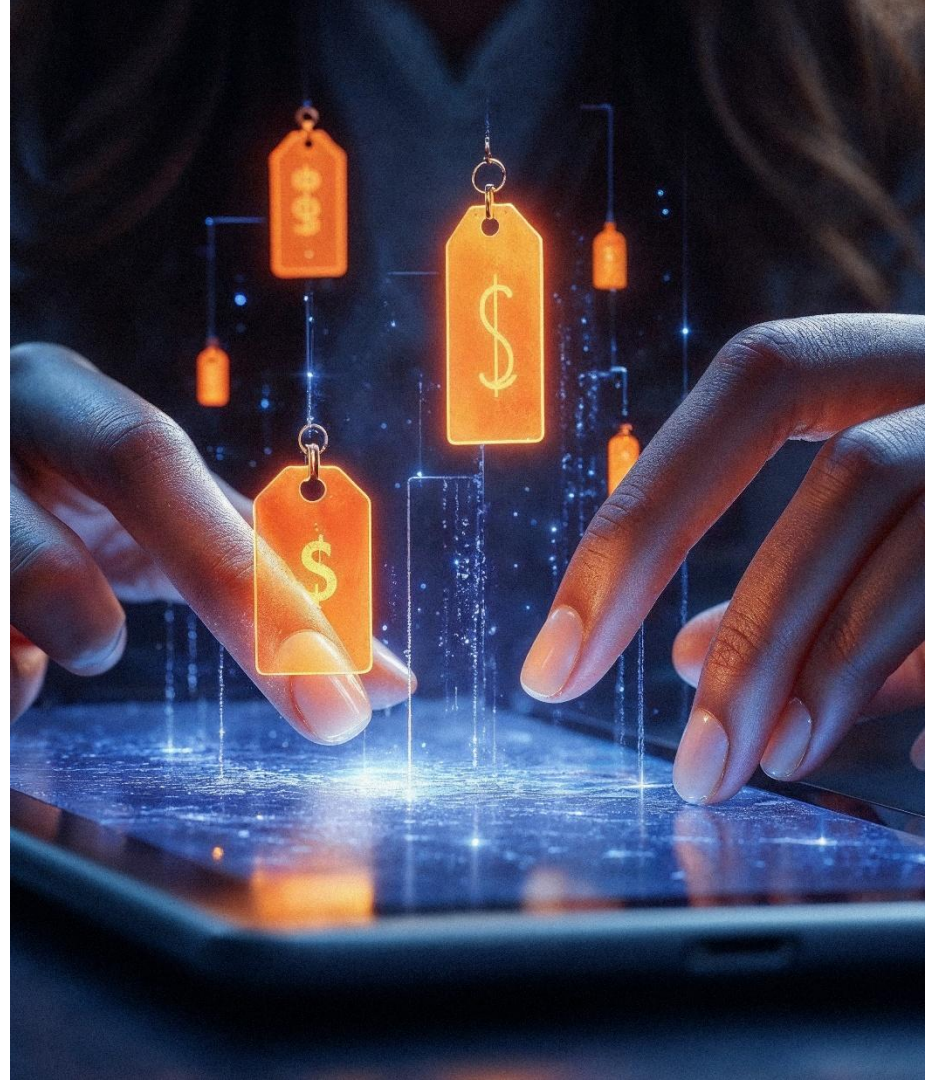


Core verification services for omega-3 brands

Pricing

The main driver for the verification is continuous testing and verification of production batches.

Hence, the annual fee is based on production volume offered as a sliding scale model, typically spanning from **0,15 – 0,30 € per unit**.





Contact us to learn more

[Find here](#) your sales representative in Europe

For details about our ingredients register to our digital platform:

WEBAPP



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www.lehvoss.de

