

OmegAvail™ Purity and Sustainability

Modern industry creates chemicals which are released into the atmosphere and can accumulate in the environment. Some of these chemicals can get caught up in our food supply including foods sourced from the sea.

Also, oxidation can occur when fatty acids are exposed to oxygen. This can cause the oil to become rancid and creates a strong fishy taste or smell.

In order to guarantee that the purest fish oil is made available to you, Designs for Health OmegAvail products contain VivoMega™ Core and VivoMega™ Platinum premium concentrated fish oil which has been manufactured by GC Reiber in Kristiansund, Norway for optimal freshness, purity and quality.

VivoMega™ premium concentrated fish oils undergo world class 3rd party and in-house testing for a large number of impurities and oxidation levels. The raw material is tested twice before encapsulation, and then the final product is tested again to ensure that a superior quality product can be delivered to you.

TESTING:

1. Raw material supplier testing

Oxidation testing is performed in-house at GC Reiber's award winning laboratory. Over 70,000 tests are performed each year to ensure the superior quality and freshness of the Vivomega concentrated oils. Third party testing is conducted on the oil to ascertain all environmental parameters.

On top of oxidation and environmental assessments, the oil is tested for radioactivity, residual solvents and pesticides. It also goes through centrifuge and filtering processes to remove microplastics.

These tests are conducted before the oil is released for supply to our manufacturer for encapsulation. Results of these tests continuously exceed not only Australian standards, but also international standards, yielding "best in class" outcomes for both freshness and purity.

SUPERIOR PERFORMANCE AGAINST ALL INTERNATIONALLY RECOGNISED QUALITY SPECIFICATIONS

	VivoMega™ Specifications (max)	Best in Class	IFOS 5 Star Criteria	GOED Monograph	EU legislation/ Ph Eur
OXIDATION PARAMETERS					
Peroxide value (meq/kg)	2	✓	5	5	10
Anisidine value	8*	✓	20	20	30
Totox	10*	✓	19.5	26	N/A
Acid Value (mg KOH/g)	1	✓	3.0	N/A	3.0
ENVIRONMENTAL PARAMETERS					
Arsenic (mg/kg)	0.1	NEUTRAL	0.1	0.1	N/A
Cadmium (mg/kg)	0.002	✓	0.1	0.1	1
Mercury (mg/kg)	0.002	✓	0.1	0.1	0.1
Lead (mg/kg)	0.003	✓	0.1	0.05	0.1
PCBs (209 Congeners) (mg/kg)	0.005	✓	0.045	0.09	0.2
Dioxins+Furans (PCDD+PCDF) (pg/g)	1	NEUTRAL	1	1.75	1.75
Dioxins-like PCBs (pg/g)	0.5	✓	1.5	3	N/A
Dioxins+Furans+Dioxin-like PCBs (pg/g)	1.5	✓	N/A	3	6
Sum PAH4 (ng/g)	2	✓	N/A	N/A	10
Benzo(a)pyrene (ng/g)	1	✓	N/A	N/A	2
Pesticides (mg/kg)	0.01	✓	N/A	N/A	N/A

*Platinum products has a standard specification maximum for Anisidine value of 10 and Totox 12, awaiting stability studies results.

2. Raw material manufacturer testing

Once the raw material has been delivered to our award-winning manufacturing facility here in Australia, it undergoes further testing before encapsulation.

An EPA/DHA assay test is performed along with specific gravity testing and microbiological testing to check for bacterial and fungal contamination.

Oxidation tests are repeated for peroxide, anisidine and Totox. Acid value testing is also repeated. Further environmental testing occurs on a yearly basis.

3. Finished product/Manufacturer testing

Being products that are listed on the Australian Register of Therapeutic Goods, Designs for Health OmegAvail™ also goes through mandatory TGO101 testing before it is released for sale.

TGO101 legislation sets out minimum quality standards for medicines supplied in Australia. It mandates testing for:

- > Impurities such as heavy metals (including lead, mercury, cadmium and arsenic), pesticides and residual solvents
- > Dissolution (to ensure the capsule will dissolve once taken)
- > Uniformity (to ensure that every capsule is the same)

Final assay testing is also performed to ensure that what we have on the label is in each capsule, and microbiological testing is performed again to ensure that no microbial contamination has occurred during the encapsulation and packing process.

MANUFACTURING

VivoMega™ premium concentrated fish oils are processed in Norway which conducts the strictest regulation of fish oil production in the world.

Freshness guarantee

EC 852/2004 Hygiene legislation mandates the registration of all fishing vessels and processing plants throughout the world. This legislation ensures that the fish are fit for human consumption and, if not processed within 24 hours, must be refrigerated, and processed within 35 hours of being caught. If the latter occurs, testing must be done to ensure that minimal protein breakdown has occurred before processing can take place. All of this ensures optimal freshness and quality and an exceptional taste profile.

ENVIRONMENTAL IMPACT

Vivo Mega

Two vital factors to consider when ingesting therapeutic quantities of omega-3 fatty acids is purity and environmental impact.

GC Reiber was established around 140 years ago and works under the guiding principle of “natural resources should be passed onto future generations in the same or better condition than when we found them”.

GC Reiber is sustainably certified by IFFO Global Standard for Responsible Supply, Friend of the Sea and Marin Trust. All three of these organisations oversee the sustainable and responsible management of international fisheries.

The manufacturing facilities have a zero-waste philosophy and recycles and/or repurposes both the energy produced during manufacture and also some of the waste material produced during fish oil processing. These processes have created a zero-carbon footprint status which is continually monitored and maintained by the company’s Energy Conservation team.

SUSTAINABLE AND RESPONSIBLE

- > Target stock not overexploited
- > Fishery to generate maximum 8% discarded waste
- > No by catch of endangered species
- > No impact to the seabed
- > Gradual reduction of carbon footprint



VIVOMEGA™ PREMIUM CONCENTRATED FISH OIL IS:

- > Sourced exclusively from oceans managed by international and government agencies that enforce exacting quality and sustainability standards
- > Non-GMO
- > Quality assured
- > Fully traceable
- > Sustainable (zero carbon footprint)
- > Free from chemical reagents
- > Tested to rigorous and exacting standards that exceed Australian and International testing requirements

GC REIBER IS:

- > A member of GOED (Global Organisation for EPA and DHA Omega-3)
- > A signatory to the UN Global Compact which establishes guidelines for human rights and environmental stewardship
- > Certified by Friend of the Sea and Marin Trust for sustainable and responsible fishing
- > Certified by IFFO Global Standard for Responsible Supply (IFFO RS)

GC REIBER LABORATORIES ARE:

- > Winner of the 2019-2020 & 2020-2021 AOCS Laboratory Proficiency Program (LPP) for reliability in testing of Omega-3 oils
- > A GOED approved laboratory (approval is granted based on testing accuracy)

Marker compound	What is it?	Why test?
Oxidants		
Peroxide Value (PV)	A primary marker of oil oxidation levels.	Peroxide is the first compound created during fatty acid oxidation.
Para-Anisidine Value (pAV)	A measure of the aldehyde and ketone levels that are created during secondary oxidation processes.	As the oil oxidises over time, PV can actually decrease as peroxide is transformed into secondary compounds such as aldehydes and alcohols during further oxidation reactions. Low PV levels therefore may not always be an accurate measure of primary oil oxidation. Measures of secondary compounds of oxidation are therefore used to give a truer indication of oil freshness.
TOTOX	Total oxidation value - a measure of the total oxidative exposure of the oil.	A tertiary test for total oil oxidation. This is the PV and pAV combined. It gives a picture of total oil oxidation.
Acid Value (AcV)	A number used to quantify the total acidity of the oil.	AcV is an indicator of oil rancidity. It also gives an indication of the number of free fatty acids that may be oxidised into secondary oxidation metabolites which are picked in pAV testing.
Environmental pollutants		
Benzo(a)pyrene	A polycyclic aromatic hydrocarbon which arises from incomplete combustion (such as exhaust fumes). It is an environmental pollutant in the air, soil and water.	Benzo(a)pyrene is an environmental contaminant that can have serious health effects. It is a known human carcinogen, that can also cause changes to the skin. In Europe, monitoring for amounts in food is mandatory as it presents a public health concern.
Sum PAH4	A group of Polycyclic aromatic hydrocarbons (PAHs) which arises from incomplete combustion (such as exhaust fumes). It is an environmental pollutant in the air, soil and water.	PAH4 is a group of 4 compounds that includes Benzo(a)pyrene and is tested to ensure that ALL of the benzopyrene compounds are captured. As mentioned above, benzopyrenes are an environmental contaminant that can have serious health effects. It is a known human carcinogen, that can also cause changes to the skin. In Europe, monitoring for amounts in food is mandatory as it presents a public health concern.
Dioxins, dioxin-like compounds, furans and PCBs	Environmental pollutants that can accumulate in the food chain - particularly in the fatty tissues of animals.	Dioxins and dioxin like substances are toxic to humans and can cause problems with reproduction and development and interfere with immune and endocrine system functioning. They are also carcinogenic. Testing is done to limit human exposure above tolerance levels.
Heavy metals	Heavy metals are naturally occurring metallic elements that can be toxic to humans at small doses. They are widely used in industrial processes and therefore have become widely distributed throughout the environment, causing concern over their contribution to environmental pollution and adverse health outcomes.	Heavy metals such as arsenic cadmium, mercury and lead are tested to ensure tolerance levels are not exceeded and exposure is limited.