



*There is a limit to how much goodness we can harvest from the sea. There is a point at which too much has been taken; too little remains. And if we reach that point, then what? How will we all get by? **We must do something now – before it's too late!***

Our Story

Lyxia Corporation began in Los Angeles in 2012 with a vision of producing rich proteins and nutrients, normally obtained from the sea, in a farm beside the sea, without the involvement of fish of any variety. No ships. No nets. The pathway to these valuable products would be direct from microalgae – the original superfood. These products would be entirely vegetarian and free of genetic alteration. Our process would be clean and green, sustainable, and beneficial.



Today, after 10 years of research, process development and scale up, with the support of so many believers in a better way, we have entered the market! We began with the selection of a specific microalgae that holds enormous potential – *Nannochloropsis sp.* Our microalgae – though only 4 microns in size – can feed and nourish us with rich proteins and oils. Growing with just sunlight, seawater, and carbon dioxide (CO₂) our microalgae improve air quality through carbon capture, produce pure oxygen for us to breath, and yield incredibly rich vegan protein and nutritious oil.

AlgaLab® Natural EPA

Our AlgaLab Natural EPA is a nutritious algal extract comprised of a variety of valuable fatty acids in their naturally occurring forms, including over 70% polar lipids – as phospholipids, glycolipids, betaine lipids and a variety of other polar lipids. The most prevalent among them is the polyunsaturated fatty acid eicosapentaenoic acid (**the Omega-3, EPA**).

In addition to EPA, there is an abundance of chlorophyll, plus beta-carotene and other carotenoids which serve as powerful antioxidants. Our Natural EPA also contains biotin (vitamin B7), as well as vitamin E, and is rich in calcium, phosphorous, potassium and magnesium – all direct from the algae.

AlgaLab Natural EPA is the unparalleled choice for those seeking a vegan source of EPA that is non-GMO, allergen free, cruelty free, and in so many ways beneficial to our bodies and our planet. Vegan EPA from *Nannochloropsis* is the most bioavailable naturally occurring Omega-3 on earth, outperforming all other known sources to include those derived from plants, fish, krill, calanus and more.

All Natural **Vegan / Vegetarian** **Sustainably Farmed** **Cruelty Free** **Clean Label**
GMO Free **Allergen Free** **Minimally Processed** **100% Traceable** **Just Algae**

The Power of Polar

Only EPA, direct from *Nannochloropsis* is presenting this essential Omega-3 in multiple polar forms. These polar lipids more rapidly interact with the gut, and absorption into the blood stream is 300% greater than the Omega-3s found in fish oil! Not only does this provide for less waste and more efficient supplementation, but AlgaLab Natural EPA also provides your body with a wealth of polar “building blocks” which can serve to support many other critical processes such as enabling efficient transport of DHA and other fatty acids across the blood-brain barrier via Mfsd2a Transport. *Lower doses, greater benefits w/w.*

AlgaLab® Natural EPA			Lipid Profile				
	AN250 BO	AN180 BO	AN180 BO	AN220 BO	AN180 BO		
Batch	2022031001	2022062301	2022031002	2022022402	2022063001	Averages	Std. Dev.
Neutral Lipid	10.78	20.59	19.06	33.16	21.38	20.99	8.01
Glycolipids	34.51	31.11	30.72	27.66	32.79	31.36	2.56
Phospholipids	34.97	31.66	27.05	20.05	29.30	28.61	5.61
Other Polar Lipids	7.66	10.24	11.33	8.76	9.75	9.55	1.40
Total Lipids*	87.92	93.60	88.16	89.63	93.22	90.51	2.73
Moisture / Volatiles	0.21	0.50	0.29	0.28	0.48	0.35	0.13
Ash	2.56	3.08	3.11	2.96	2.74	2.89	0.23
Protein	0.67	0.73	0.10	0.54	0.67	0.54	0.26
Carbohydrates**	8.84	2.09	8.34	6.59	2.89	5.75	3.10
Chlorophyll	0.36	0.43	0.64	0.48	0.36	0.45	0.12

*Total Lipids = Neutral Lipid + Glycolipids + Phospholipids + Other Polar Lipids
**Carbohydrates = 100 - Total Lipids - Moisture & Volatiles - Ash - Protein

Better, By Design

Our global population is growing and the demand on our ocean fisheries is ever expanding. There will be a point of collapse if this resource is not carefully managed. Rather than relying on fish as the source of these essential Omega-3s, we have gone directly to farmed algae for natural, vegetarian EPA in its most beneficial polar forms. We use every component of the green algae we produce. We recycle our sea water, and we use purified CO₂ gas from industry as our carbon source - thus reducing greenhouse gases. Choosing products containing AlgaLab Natural EPA demonstrates your commitment to a smarter, sustainable, and more beneficial future.

In terms of all of us together on this beautiful blue-green planet, we are in a transition phase industrially, commercially, socially, and nutritionally. What products will succeed, how they will be produced, how they will be sold, and what that means to producers and consumers alike – it’s all in flux. Our company is producing what the global market is demanding, and we are producing it the way all things will need to be produced in the future- clean. Leading the Blue Economy in EPA direct from microalgae, we are as green as our tiny algae in terms of purity and sustainability while being absolutely in tune environmentally and ecologically. It is companies such as ours that will be embraced, supported, and rewarded by consumers and governments going forward. We are happy about this and encourage all industries to follow.

Join us now! Be a part of something awesome!

AlgaLab® CV

Microalgal EPA Polar Lipids + ALA

Breakthrough Nutrition for Cardiovascular Health

Formula: 120mg/g AlgaLab Natural EPA with polar lipids; 200mg/g ALA from flaxseed

AlgaLab CV marks an incredibly significant advancement in Omega-3 nutrition for cardiovascular support. Our Natural EPA polar lipids are the direct extract of *Nannochloropsis gaditana*, a microalga producing lipids in *greater than 70% polar lipid form* (glycolipids, phospholipids, betaine lipids and other polar lipids). Our preliminary consumer study administered 2.1g and 4.2g of the above formulation and demonstrated truly remarkable corrections in key cardiovascular measures in as short as 1 month. While the AlgaLab CV contains EPA and ALA, of notable significance is the absence of DHA which, when combined with EPA, has been associated with increases in low density lipoprotein (LDL-C) in hypertriglyceridemic subjects.^{1,2}

AlgaLab CV Consumer Study (Ongoing)

AlgaLab CV	Subjects	TG	Subjects	TC	Subjects	LDL-C	Subjects	HDL-C
250mg	21	-14.25%	19	-10.19%	18	-15.55%	19	2.80%
500mg	4	-29.02%	4	-27.98%	4	-30.43%	4	13.34%

Fish and krill oil (EPA+DHA), while effective in reducing serum triglycerides and often total cholesterol, have not been shown to reduce incidence of major adverse cardiovascular events (MACE) to include CV death, non-fatal MI, non-fatal stroke, hospitalization for unstable angina, and coronary revascularization. Whereas, in the REDUCE-IT trial, (8,179 high triglyceride patients using a statin) 4g EPA (icosapent ethyl) in the absence of DHA was demonstrated effective in reducing serum triglycerides, total cholesterol, and MACE.³ Further investigation into the mechanism of benefit in the EVAPORATE trial using computed tomography, showed 4g EPA reducing low-attenuation plaques by 17% over 18 months.⁴ Plaque regression with intervention in EVAPORATE was consistent in several measurements of plaque volume including total plaque. Changes in vulnerable plaque characteristics with IPE treatment was not associated with TG or other lipid changes. The benefits of IPE were observed even after multivariable adjustment for risk factors of CV.⁵

Preliminary data for AlgaLab CV has demonstrated very significant decreases in key CV indicators using just 250mg and 500mg of AlgaLab Natural EPA carried in flaxseed oil. Whereas fish and krill oil have been associated with elevations in LDL-C, our DHA-Free, Natural EPA polar lipids were associated with significant reductions in LDL-C.^{1,2}

AlgaLab CV has the added benefits of being plant-based, sustainably farmed, minimally processed, allergen-free, 100% traceable and very accessible.

Sustainable Nutrition. Superior Performance.

1. Kastelein JJP, et al. Omega-3 free fatty acids for the treatment of severe hypertriglyceridemia: The EpanoVa fOr Lowering Very high triglyceridEs (EVOLVE) trial. *Journal of Clinical Lipidology*, Vol 8, No 1, February 2014.
2. Mozaffarian D, et al. Effectiveness of a Novel ω -3 Krill Oil Agent in Patients with Severe Hypertriglyceridemia. A Randomized Clinical Trial. *JAMA Network Open*. 5(1):e2141898. January 6, 2022
3. Bhatt DL, et al. Cardiovascular Risk Reduction with Icosapent Ethyl for Hypertriglyceridemia. *New England Journal of Medicine*, 380;1 nejm.org January 3, 2019.
4. Budoff MJ, et al. Effect of icosapent ethyl on progression of coronary atherosclerosis in patients with elevated triglycerides on statin therapy: final results of the EVAPORATE trial. *European Heart Journal* (2020) 41, 3925–3932
5. Sherratt SCR, et al. Role of Omega-3 Fatty Acids in Cardiovascular Disease: the Debate Continues. *Current Atherosclerosis Reports* (2023) 25:1–17.

AlgaLab® BrainRaft™

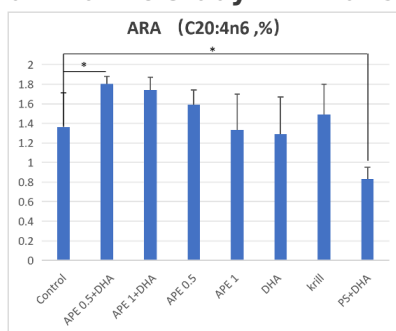
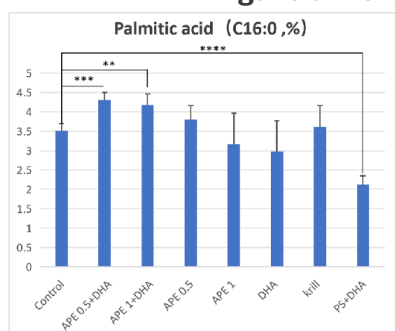
Microalgal EPA Polar Lipids + DHA

Highly Effective DHA Transport for Cognitive Health

Formula: 300mg DHA daily as a 1:2 Ratio of AlgaLab Natural EPA with polar lipids to DHA TG.

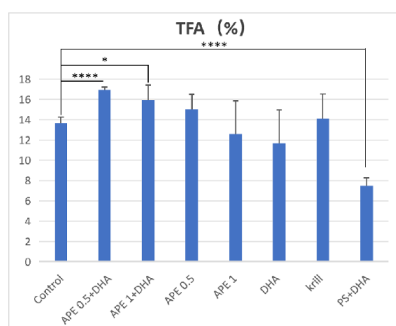
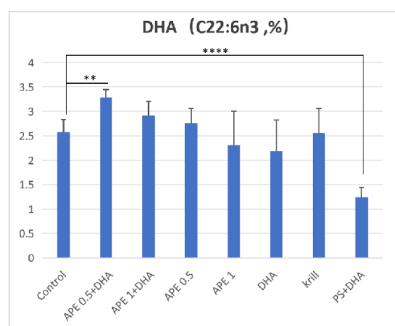
AlgaLab BrainRaft is a novel nutraceutical formulation proven to enable transport of DHA across the blood brain barrier (BBB) in the mammalian model. This marks an incredibly significant advancement in Omega-3 nutrition for cognitive support. AlgaLab Natural EPA polar lipids are the direct extract of *Nannochloropsis gaditana*, a microalga producing lipids in *greater than 70% polar lipid form* (glycolipids, phospholipids, betaine lipids, and other polar lipids). Our preliminary murine study administered the equivalent of a 300mg/day human dose of DHA in a polar-lipid-rich matrix for 15 days, after which we confirmed a 27% increase in DHA in the brain over control. This represents truly remarkable uptake and incorporation of DHA into brain tissue. While AlgaLab BrainRaft contains EPA, of most significance here is the rich resource of polar lipids which, when co-administered with DHA, may provide the essential building blocks for the body to construct polar lipid complexes such as lysophosphatidylcholine-DHA (LPC-DHA). LPC-DHA has been shown to transit the BBB via the Mfsd2a receptor, whereas the neutral triglyceride form of DHA (found in fish oil and algal DHA) cannot readily cross the BBB.

AlgaLab BrainRaft Murine Study – FA Transport Across BBB



APE 0.5 + DHA
Increased the fatty acid content in the cerebral cortex

		% Increase
Palmitic acid	C16:0	+22.79
Stearic acid	C18:0	+23.20
Oleic acid	C18:1n9c	+20.33
ARA	C20:4n6	+32.35
DHA	C22:6n3	+27.13
TFA		+24.16



PS + DHA
Decreased the fatty acid content in the cerebral cortex

		% Decrease
Palmitic acid	C16:0	-39.60
Stearic acid	C18:0	-42.01
Oleic acid	C18:1n9c	-46.47
ARA	C20:4n6	-38.97
DHA	C22:6n3	-51.94
TFA		-45.10

Sugasini et al state deficiency of DHA is associated with several neurological disorders, including Alzheimer's, Parkinson's, schizophrenia, and depression. Unlike the liver, the brain cannot efficiently convert dietary alpha linolenic acid (18:3, n-3) to DHA, and is almost completely dependent upon the uptake of preformed DHA from the plasma. However, dietary supplementation with the currently available preparations of DHA such as fish or krill oil, algal DHA, DHA-enriched egg phospholipids, ethyl esters and sardines does not appreciably increase brain DHA levels in adult mammals.¹

Sugasini et al further report dietary free DHA is predominantly directed to adipose tissue and heart in the form of TAG, whereas dietary LPC-DHA was directed to the brain in the form of phospholipid.

AlgaLab BrainRaft has the added benefits of being plant-based, sustainably farmed, minimally processed, allergen-free, 100% traceable and very accessible.

Sustainable Nutrition. Superior Performance.

1. Sugasini D, Thomas R, Yalagala PCR, Tai LM, Subbaiah PV. Dietary docosahexaenoic acid (DHA) as lysophosphatidylcholine, but not as free acid, enriches brain DHA and improves memory in adult mice. Sci Rep. 2017 Sep 12;7(1):11263.

AlgaLab® Natural EPA Oleoresin

Natural EPA Oleoresin

The Natural EPA Oleoresin from *Nannochloropsis* sp. is as close as you can get to the whole food microalgae as an extract.

Our Natural EPA is present in four principal forms:

Polar Lipids (as phospholipids, glycolipids, betaine lipids and other polar lipids)

EPA as Neutral Lipids

The Natural EPA Oleoresin is a deep dark green material with a characteristic and pleasing marine essence, rich in natural pigments and antioxidants including chlorophyll and beta-carotene.

Deep dark green oleoresin

Product Code	Product Name	Polar Content	Natural EPA	Total Omega-3s*
AN200 BO	AlgaLab Natural EPA Oleoresin AN200 BO	70%+	200mg/g	200mg/g
AN220 BO	AlgaLab Natural EPA Oleoresin AN220 BO	70%+	220mg/g	220mg/g

AlgaLab DHA Oils

DHA Oils

Our DHA TG 40% and 50% oils are natural extracts derived from *Schizochytrium* sp.

Our DHA rTG 70% Oil, a natural extract of *Schizochytrium* sp. , is further processed through distillation and re-esterification and 100% free of ethyl ester.

Light-yellow transparent oil

Product Code	Product Name	DHA	Total Omega-3s*
ADT400 BW	AlgaLab DHA TG 40% Winterized Oil ADT400 BW	400mg/g	400mg/g
ADT500 BW	AlgaLab DHA TG 50% Winterized Oil ADT500 BW	500mg/g	500mg/g
ADT700 BW	AlgaLab DHA rTG 70% Winterized Oil ADT700 BW	700mg/g	700mg/g

AlgaLab Complete Omega Natural Oil Blends

Natural EPA Oil Blends

The Natural series of Complete Omega blends incorporates both Natural EPA from *Nannochloropsis* sp. and DHA from *Schizochytrium* sp.

The Complete Omega Natural Oil blends are deep dark green oils with a characteristic and pleasing marine essence. In addition to EPA and DHA, our Natural blends are rich in natural pigments and antioxidants including chlorophyll and beta-carotene.

Deep dark green viscous oil

Product Code	Product Name	Natural EPA	DHA	Total Omega-3s*
ACP370 BD	AlgaLab Complete Omega Natural ACP370 BD	70mg/g	300mg/g	370mg/g
ACP350 BD	AlgaLab Complete Omega Natural ACP350 BD	100mg/g	250mg/g	350mg/g
ACN370 BD	AlgaLab Complete Omega Natural ACN370 BD	120mg/g	250mg/g	370mg/g

Product Code	Product Name	Polar Extract	1:2	DHA rTG 700	Total Omega-3s*
ACN440 BR	AlgaLab BrainRaft™ ACN440 BR	73mg/g		375mg/g	448mg/g

AlgaLab EA Omega Natural Oil Blends

The EA Omega Natural Oil blends incorporate both Natural EPA from *Nannochloropsis* sp. and ALA from *Linum usitatissimum* (Flaxseed).

Deep dark green viscous oil

Product Code	Product Name	ALA	Natural EPA	Total Omega-3s*
AEN320 BA	AlgaLab CV	200mg/g	120mg/g	320mg/g
AEN375 BA	AlgaLab EA Omega Natural AEN375 BA	250mg/g	125mg/g	375mg/g

AlgaLab Whole Algae Powder / Biomass

Whole Algae / Biomass

Whole Algae Powder is our *Nannochloropsis* sp. biomass.

Forest Green Flowing Powder

Product Code	Product Name	Natural EPA	Total Omega-3s*
WAP2-45 FBP	AlgaLab Food Grade Biomass	4.5mg/g - 5.9mg/g	4.5mg/g - 5.9mg/g
WAP2-60 FBP	AlgaLab Food Grade Biomass	6.0mg/g - 7.5mg/g	6.0mg/g - 7.5mg/g

Pack Sizes

◦ Natural EPA Oleoresin - 20Kg Drums

◦ Oils, Oil Blends - 10Kg and 190Kg drums

◦ Whole Algae Biomass - 20Kg kraft poly bags

* Each of our oil blends include varying levels of additional, naturally occurring fatty acids to include Omega-6, Omega-7 and Omega-9.

AlgaLab Complete Omega Natural Oil Capsules

Natural EPA Oil Blend Capsules

The Natural series of Complete Omega blends incorporates both Natural EPA from *Nannochloropsis sp.* and DHA from *Schizochytrium sp.*

Our Natural EPA is present in three principal forms:

Polar Lipids (as phospholipids, glycolipids, betaine lipids and other polar lipids)

EPA as Neutral Lipids

The Complete Omega Natural Oil blends are deep dark green oils with a characteristic and pleasing marine essence. In addition to EPA and DHA, our Natural blends are rich in natural pigments and antioxidants including chlorophyll and beta-carotene.

Deep dark green oil in clear capsules.

Product Code	Encapsulated Oil Blend	Cap	Fill Wt.	Natural EPA	DHA	Total Omega-3s*
ACN370 BD LHC	AlgaLab Complete Omega Natural ACN370 BD	LHC	725mg	87mg	181mg	268mg/cap
ACN370 BD SG	AlgaLab Complete Omega Natural ACN370 BD	SG	800mg	96mg	200mg	296mg/cap
ACN440 BR LHC	AlgaLab BrainRaft™ ACN440 BR	LHC	800mg	59mg	300mg	359mg/cap
ACN440 BR SG	AlgaLab BrainRaft™ ACN440 BR	SG	800mg	59mg	300mg	359mg/cap

AlgaLab EA Omega Natural Oil Capsules

The EA Omega Natural Oil blends incorporate both Natural EPA from *Nannochloropsis sp.* and ALA from *Linum usitatissimum* (Flaxseed).

Deep dark green oil in clear capsules.

Product Code	Encapsulated Oil Blend	Cap	Fill Wt.	ALA	Natural EPA	Total Omega-3s*
AEN320 BA LHC	AlgaLab CV	LHC	700mg	140mg	84mg	224mg/cap
AEN320 BA SG	AlgaLab CV	SG	1050mg	210mg	126mg	336mg/cap
AEN375 BA SG	AlgaLab EA Omega Natural AEN375 BA	SG	800mg	200mg	100mg	300mg/cap

Pack Sizes

Each of the above encapsulated plant-based Omega-3 blends are available as bulk caps or bulk packed 60ct. or 90ct. label-ready bottles of capsules.

• Vegan SeaGel® Soft Gels. SeaGel is a registered trademark of IFF, Inc.

• Vegan Liquid Hard Capsules

* Each of our oil blends include varying levels of additional naturally occurring fatty acids to include Omega-6, Omega-7 and Omega-9.

