

**CASSA** BioTec

## OMEGA-3 EPA DHA



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## CASSA BIOTEC OMEGA-3 EPA DHA

*At Cassa Bio Tec we harness nature's own processes to convert 'commercial waste' into high quality, value added products...*

Omega-3 fatty acids are essential for human body growth and development. Extensive scientific research on brain and retina development, and a wide-range of other areas related to DHA, EPA and ALA have been continuously conducted. The findings on improving the immune system, brain, and eyes, reducing inflammation, and lowering blood pressure have been published and presented in scientific journals and various conferences.

Omega-3 fatty acids belong to a family of polyunsaturated fatty acids with the first carbon-carbon double bond in the third carbon from the omega end. The important Omega-3 fatty acids in nutrition include alpha-linolenic acid (ALA), eicosapentaenoic acid (EPA), and docosahexaenoic acid (DHA). Omega-3 fatty acids, cis-5, 8,11,14,17-Eicosapentaenoic acid (C20:5; EPA) and cis-4,7,10,13,16,19-Docosahexaenoic acid (C22:6; DHA), Omega-3 long chain polyunsaturated fatty acids (LCPUFAs), which include eicosapentaenoic acid (EPA, C20:5n-3) and docosahexaenoic acid (DHA, C22:6n-3), are natural products that are essential for human and animal health.

EPA and DHA have crucial roles in the structure and function of cellular membranes and serve as precursors to several important eicosanoids including prostacyclins, leukotrienes and prostaglandins. There have been many clinical studies showing a wide range of health benefits from the omega-3 LCPUFAs, especially EPA and DHA (1-3). In general, it is believed that EPA is able to improve cardiovascular health, mental health, and immune function, while DHA is able to improve infant cognitive development, brain function, and eye health. The Japan EPA Lipid Intervention Study (JELIS) showed that EPA is a promising treatment for prevention of major coronary events. The AMR101 study also showed that pure EPA fatty acid significantly reduced triglyceride levels in adult patients with severe hypertriglyceridemia. The human body can only inefficiently synthesize EPA and DHA from omega-3 alpha-linolenic acid (C18:3; ALA), but cannot de novo synthesize them. The major source for EPA and DHA is from fish oil, and a minor source of DHA is acquired from micro-algae.

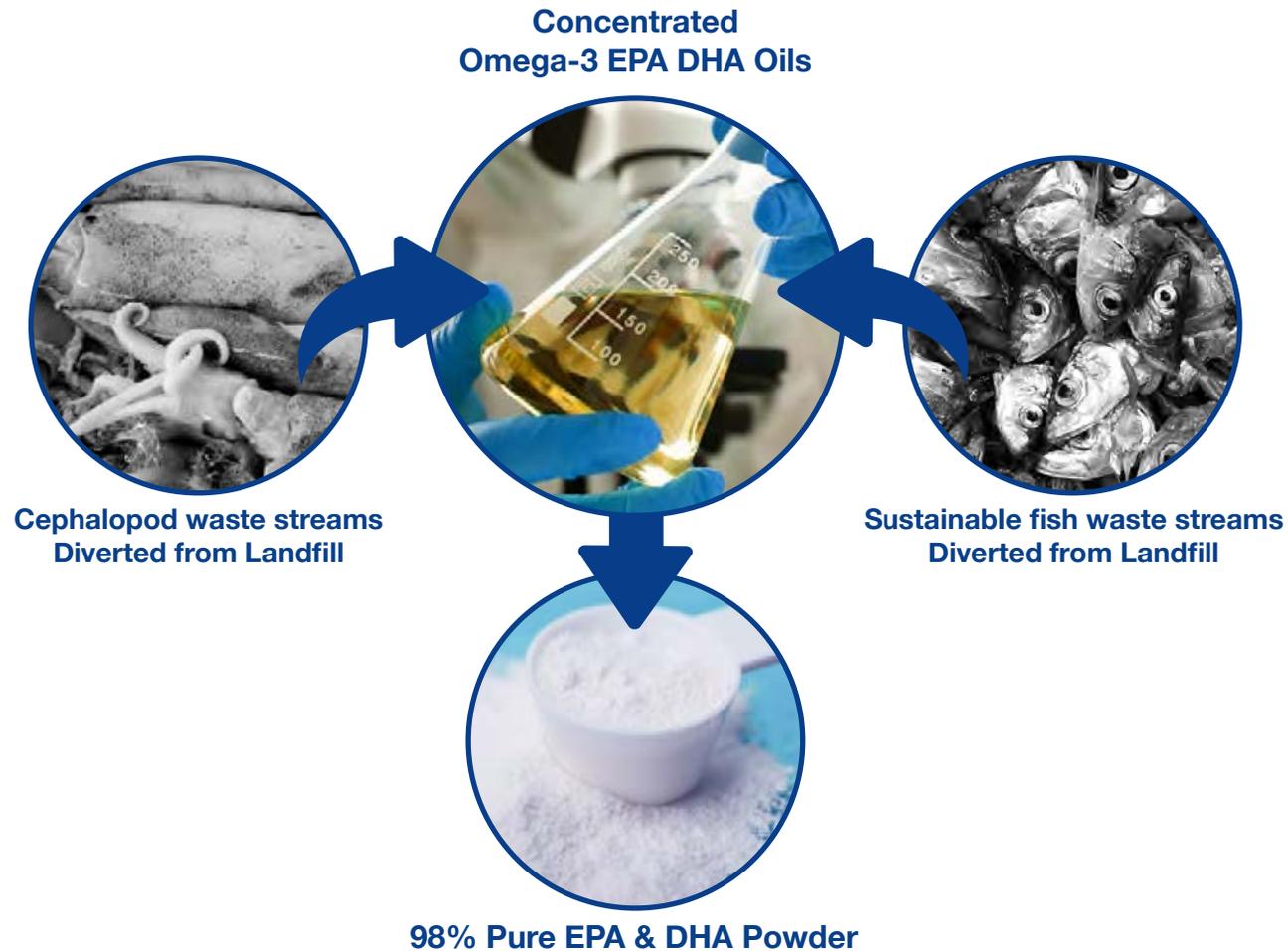
**To meet the increased world demand for Omega-3 EPA and DHA Cassa BioTec with their proprietary breakthrough technology have developed a clean and sustainable source of omega-3 fatty acids EPA and DHA by diverting food chain marine waste that was previously destined to land fill as a waste product as a solution to targeting and over fishing our oceans.**

The demand for EPA and DHA is growing, but most commercially available EPA and DHA are produced using wild-caught ocean fish. Ocean fisheries are being depleted by over-fishing and are not a sustainable source for the increased demand.



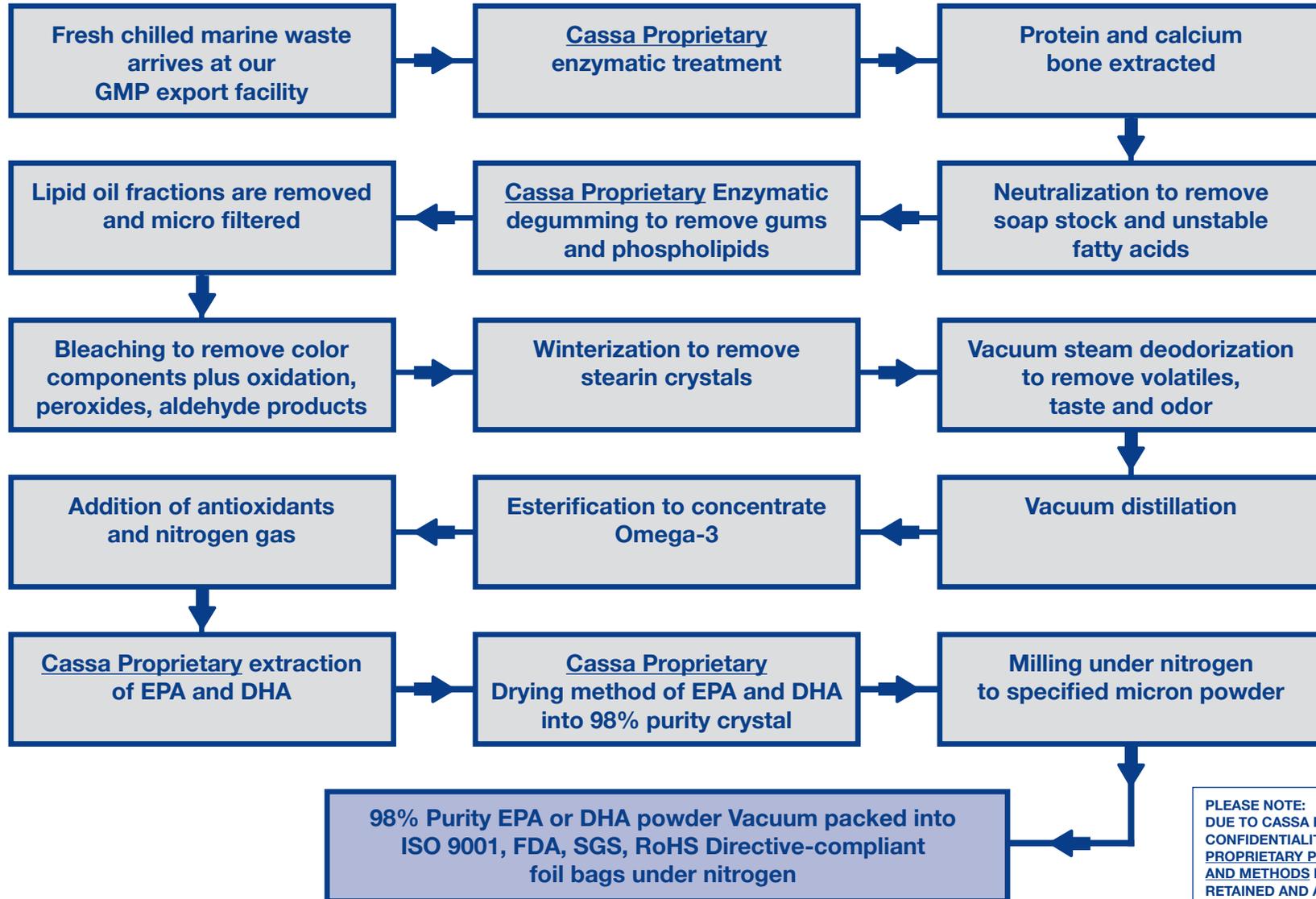
## CASSA BIOTEC'S BREAKTHROUGH TECHNOLOGY

Our cutting-edge technology enables us to take selected marine species like Calamari, Tuna and any fish species waste streams from certified food approved processors that is processed on a daily basis ensuring the up most freshness.



# CASSA BIOTEC UNIQUE BREAKTHROUGH TECHNOLOGY PROCESS

CASSA BioTec



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CONFIDENTIALITY THE  
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AND METHODS HAVE BEEN  
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