

**NuMega**<sup>TM</sup>  
**Ingredients**

Delivering Active Nutrition



# A SMART CHOICE OF OMEGA

Oil & Microencapsulated  
Omega 3&6 PUFA



**SOCIUS**<sup>TM</sup>  
INGREDIENTS BY DESIGN



## Smart Omega-3

DHA (Docosahexaenoic acid) is a long chain Omega-3 fatty acid predominantly found in oily fish and algal oil. Studies show that it plays a vital role in:

### Pregnant Mothers

- Visual development and brain growth of unborn babies
- Increasing parent-rated sleep and reducing the risk of skin & respiratory allergic diseases

### Children

- Brain development and cognitive functioning
- Developmental and maintenance role in visual acuity

### Athletes

- Reduced heart rate and O2 demand during exercise
- Reduced muscle soreness, faster exercise recovery, improved cognitive function

### Elderly

- Helps manage heart and brain disorders in elderly population
- Studies on the brain and heart for elderly people have also shown that an increase in Omega-3 fatty acids can have a positive effect on memory functions and cardiovascular health

### Nu-Mega Driphorm® Powders

Nu-Mega Driphorm® powders utilize CSIRO's MicroMax technology under exclusive licence to microencapsulate nutritional oils. The patented technology allows up to a 60% oil payload with superior odor and taste masking. With a proven track record since 2001, Nu-Mega Driphorm® powders are internationally recognised as the benchmark for quality and stability. Nu-Mega Driphorm® powders are used in a wide range of infant formula, growing up milks and food applications.

### Nu-Mega Driphorm® HA Hypoallergenic

For non-dairy application Nu-Mega Driphorm® HA hypoallergenic. Cow's milk protein allergy affects around 2-6% of children with the highest prevalence during the first year of life. Nu-Mega Driphorm® HA utilises a patented carbohydrate technology which meets regulatory guidelines around the world.





## Technology

The patented microencapsulation technology has more than 10 years of proven global use within infant and food applications.

The microencapsulation technology provides:

- Best in class application performance
- Protection against oxidation and superior sensory stability.
- Suitability for a wide range of food applications.
- Non-refrigerated storage with a shelf life of 24 months, lowering cost of logistics and storage.

The technology can allow 60% oil loaded powder delivering up to 38% DHA + EPA.

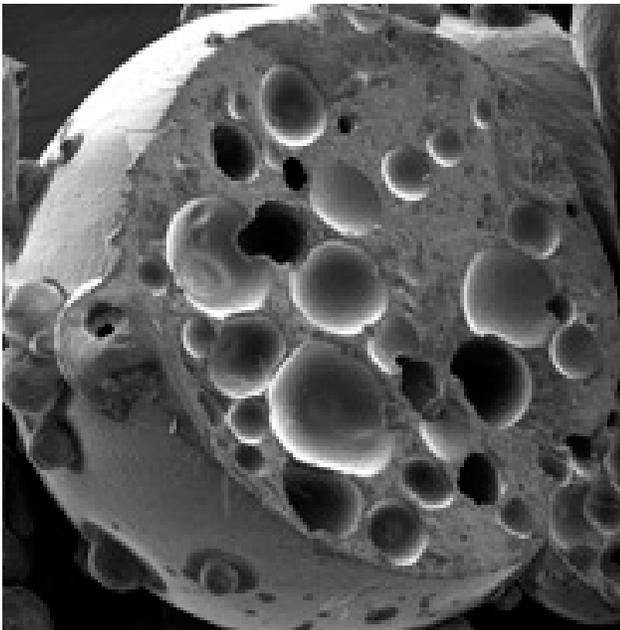
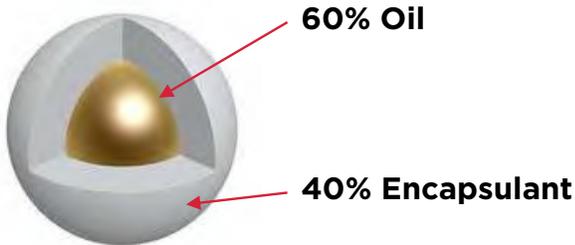


Image from an electron microscope showing a particle of encapsulated omega-3.

### Applications

Nu-Mega utilises a number of microencapsulation technologies that enable nutritional oils, such as tuna, fish, algal and fungal oils, to be added to infant formula, medical capsule, foods and beverages. For example:

#### Bars

By adjustment of the addition level of Driphorm® HiDHA® 50, nutrition bars can be designed to deliver varying levels of Omega-3 fatty acids. Socius ingredients have developed bars that contain 300mg of DHA with shelf life of 1 year at 25°C and no fishy flavor.



#### RTM Protein Powders

Socius Ingredients have incorporated 300mg of DHA into RTM Protein Powders. We recommend the use of Nu-Mega Ingredients Driphorm® D-60 as the optimal grade of encapsulated Omega-3 DHA fatty acids for this application.





### Juice

Functional beverages are one of the fastest growing markets. Socius ingredients have created recipes that deliver higher and lower levels of Omega-3 if so desired in juices. The Driphorm® D-60 is an excellent functional ingredient to add value to product lines in this category.



### Milk

Driphorm® HiDHA® 50 and D-60 are stable under UHT processing conditions. It can be added without compromising the sensory appeal of milk and prevents undesirable off flavors. Socius ingredients have developed a milk product that contains 100mg of DHA.



### Drinking Yogurt

Driphorm® HiDHA 50 and D-60 are stable under typical fermentation conditions and as such no special treatment or adjustments are required during the process. Socius ingredients have developed a drinking yoghurt that contains 100mg of DHA. The shelf life of fortified drinking yogurt containing Driphorm® HiDHA® 50 is estimated to be 9 months when stored aseptically under TetraPak at ambient condition (20°C).



### Iced Tea

100mg of DHA has been incorporated into an iced tea. There are no off/fish flavors detected and the tea is shelf stable for up to 3 months when stored under refrigeration (5-7°C).



### Prenagen Beverage

Similar to the juice and milk beverage mentioned previously, 100mg of DHA has been incorporated into a Prenagen beverage by Socius ingredients. The International Society for the Study of Fatty Acids and other Lipids (ISSFAL) recommends pregnant and lactating women consume a minimum of 300mg of Omega-3 DHA/day.





## Reliable & Sustainable Fish Sourcing

### Fish Oil Source

Our omega-3 DHA (Docosahexaenoic Acid) tuna oil products are derived from legal regulated fishing practices and are environmentally sustainable. our sourced oil is produced as a by-product of the processing and canning of these select tuna species. this means our production is considered a value-added stream utilisation. Thus Clover helps in utilising such oils, which would have otherwise been discarded or used in aquaculture/fertilizer applications.

### How the fish is caught

The source of our tuna oil is caught responsibly with the least impact to the environment they live in, using only dolphin-safe catch methods. No drift nets or gill nets are used. furthermore, our tuna suppliers and refinery partners do not participate in shark finning and ensure they minimise small/juvenile catches. Instead they invest in the research and development of eco-friendly fishing methods.

## Nu-Mega Accreditations

ISO 9001:2008

Halal

HACCP / GMP

Kosher

## World Class Technology

Nu-Mega's superior microencapsulation technology enables nutritional oils, such as tuna, algal and fungal oils, to be added to infant formula, foods and beverages. Developed through extensive research and development, our proprietary technologies protect those sensitive oils from oxidation, allowing them to be incorporated into a range of applications. All of our products reach the highest standards of purity, stability and performance, allowing you to maximise and deliver nutrition whilst masking unpleasant taste and odour.

## Technology Support & Customer Services

We are well positioned to provide the necessary support for the use of Nu-Mega products within our clients chosen product application, like product development support, on-site technical support, shelf life stability verification, analytical verification of DHA fortification and regulatory support (nutritional labelling claims).

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