ALGAMAC 3050 flake™

LIVE ALGAE Replacement - Substitute

Artemia/Rotifer Enrichment Media

Formula Ingredient

Nutrient-rich technologies for improving survival, disease resistance, growth and development in crustacea, finfish, and molluscs through hygienically safe, cost effective diets with superior levels of DHA.

- **Sound nutritional profile.**
- **High percentage of lipids.**
- **Extremely high levels of DHA (22:6w3).**
- **Good buoyancy characteristics.**
- **Increased Growth & Survival Rates**
- **Significant Reduction in Live Algae Costs**
- **Highest in Omega-3 (DHA)**
- **Easy To Use**

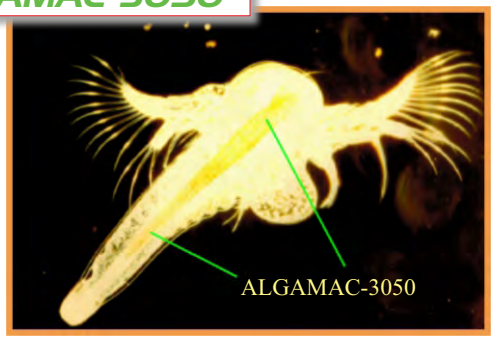
Increased Growth & Survival Rates. Nutritionally balanced with amino acids, vitamins & minerals, ALGAMAC-3050 can be used as a live algae replacement/substitute, Rotifer or Artemia enrichment, direct feed or formula ingredient insuring healthier animals with increased disease resistance.

Significant Reduction in Live Algae Costs. Partially substitute ALGAMAC-3050 for live algae and save up to 80% (Considering reduced labor, energy and overhead requirements for live algae production).

Highest in Omega-3 (DHA). With an outstanding fatty acid profile, ALGAMAC-3050 (43% DHA), offers unparalleled energy levels critical to larvae and post-larvae growth and metamorphosis.

Easy To Use. *No messy oils.* ALGAMAC-3050 is a dry, flaked particle which emulsifies readily in water. The spray-dried cells in exhibit high stability in suspension and maintains excellent water quality characteristics.

Brine Shrimp enriched with **ALGAMAC-3050**



Packed in 800g foil bags (8kgs/cs-10x800g)
Also available in 15kg foil bag

** See "Nutritional Enhancement of n-3 and n-6 Fatty Acids in Rotifers and *Artemia* nauplii by Feeding Spray-dried Schizochytrium sp." - William Barclay and Sam Zeller. Read or download a copy from our website under "Technical Papers" at www.aquafauna.com.

Aquafauna BIO-MARINE, INC.

PO Box 5, Hawthorne, California 90250 USA Tel: 310-973-5275 Fax: 310-676-9387
aquafauna@aquafauna.com | www.aquafauna.com

Feeding Protocols

ENRICHMENT PREPARATION

Mix measured amount of ALGAMAC-3050 with either fresh or seawater in an electric blender for 1-2 minutes or until completely emulsified. Flake particles will break down into individual cells (6-8 microns). When blending is complete, strain through sub 80-micron mesh to eliminate any foam.

ARTEMIA ENRICHMENT

Transfer newly hatched Artemia nauplii to an enrichment tank with **clean, filtered** seawater. Maximum density of Artemia should not exceed 100,000 nauplii per liter of water. Add the prepared ALGAMAC-3050 mixture to the enrichment tank at a rate of 0.2 grams per liter (per 100,000 nauplii). Aerate enrichment tank vigorously so that oxygen levels exceed 4ppm during the 12 hours of enrichment. Harvest the enriched Artemia nauplii after 12 hours. If higher levels of DHA are desired, repeat enrichment process by adding another 0.2 grams per liter for an additional 12 hours.

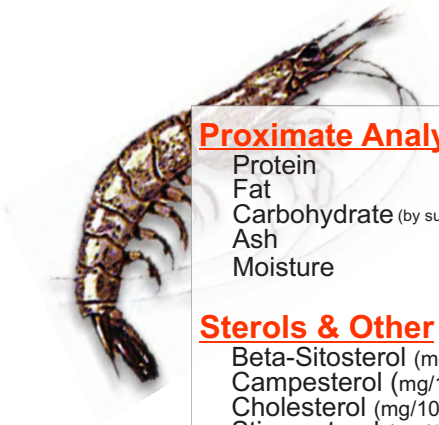
Ratio of Application: 0.2 grams/liter/12 hours/ 100,000 Artemia nauplii

ROTIFER ENRICHMENT

Transfer harvested rotifers to an enrichment tank with clean, filtered seawater. Maximum density of rotifers should not exceed 500,000 rotifers per liter of seawater. Add the prepared ALGAMAC-3050 mixture to the enrichment tank at a rate of 300 mg per 1,000,000 rotifers. Aerate vigorously so that oxygen levels exceed 4.0 ppm during the 8 hours of enrichment. If higher levels of DHA are desired, repeat enrichment process by adding another 300 mg ALGAMAC-3050 per 1,000,000 rotifers for an additional 8 hours.

Ratio of Application: 300 mg ALGAMAC-3050 per 1,000,000 rotifers.

Profiles



Proximate Analysis

	Concentration (% weight)
Protein	17.6
Fat	56.2
Carbohydrate (by subtraction)	15.9
Ash	8.2
Moisture	2.1

Sterols & Other

Beta-Sitosterol (mg/100g)	19.7
Campesterol (mg/100g)	10.6
Cholesterol (mg/100g)	178.0
Stigmasterol (mg/100g)	154.0

Other

Lecithin (mg/100g)	258
Lutein (mg/100g)	<.12

Fatty Acid Profile

Fatty acid content (%w/w)

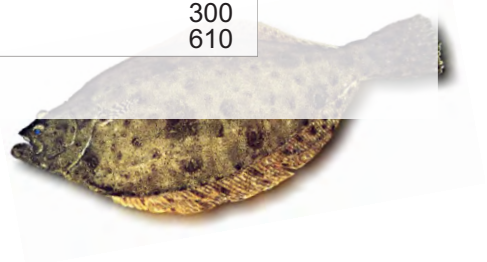
Fatty Acid	Name	%TFA
14:0	Myristate	8.85
16:0	Palmitate	26.6
16:1	Palmitoleate	0.42
18:0	Stearate	0.64
18:1	Oleate	0.11
20:3w6	Eicosatrienoic (ETA)	0.22
20:5w3	Eicosapentaenoic (EPA)	2.88
22:5w6	Docosapentaenoic (DPA)	17.04
22:6w3	Docosahexaenoic (DHA)	43.27

Vitamins

Biotin (ug/100g)	237.00
Choline (ug/100g)	188.00
Folic Acid (ug/100g)	357.00
Inositol	180.00
Niacin (mg/100g)	7.16
Pantothenic Acid (mg/100g)	10.10
Pyridoxine (mg/100g)	3.62
Riboflavin (mg/100g)	1.65
Thiamine (mg/100g)	2.40
Vitamin A (IU/100g)	<100
Vitamin B12 (mg/100g)	65.80
Vitamin C (mg/100g)	71.30
Vitamin D (IU/100g)	377.00
Vitamin E (IU/100g)	<0.5

Amino Acid Profile

	mg/100g
Alanine	750
Arginine-HCL	1650
Aspartic Acid	1260
Glutamic Acid	4180
Glycine	640
Histidine-HCL	240
Isoleucine	400
Leucine	700
Lysine-HCL	530
Phenylalanine	420
Proline	400
Serine	460
Threonine	440
Tyrosine	300
Valine	610



Storage Conditions:

- **Best if kept under 20 degrees C.**
- **Shelf life: up to 24 months.**

It is well documented that DHA rich fatty acids are required for proper larval development. Fish oils may exhibit higher EPA levels than ALGAMAC-3050, however, through the process of retroconversion, most marine organisms can produce sufficient levels of EPA from DHA. Conversely, many types of marine animals are incapable of elongating EPA into DHA resulting in a DHA deficiency unless provided with a DHA rich diet (ie: ALGAMAC-3050).

PO Box 5, Hawthorne, California 90250 USA
Tel: 310-973-5275 Fax: 310-676-9387
aquafauna@aquafauna.com | www.aquafauna.com