



**Who We Are**

Reed Mariculture is the world's largest producer of marine microalgae concentrates. Our **Instant Algae®** larviculture feeds are used by over 500 hatcheries, universities, and marine ornamental operations in more than 70 countries around the world. We also produce zooplankton, copepods, and weaning feeds.

**Our Products**

Reed Mariculture's **Instant Algae** products are closer to nature than any other feed on the market. We produce whole-cell, whole-food microalgae feeds and enrichments from marine algae using proprietary processes. Our products provide fish, bivalve and shrimp hatcheries with clean, convenient, **long shelf-life** feeds that are superior choices to replace or supplement live microalgae. Our feeds ensure stable and rapidly-reproducing rotifer populations that offer rich nutritional value.

**Our Services**

We pride ourselves on our customer service and technical support. In addition to our expertise growing microalgae, we provide rotifer starter cultures (10 million to over 1 billion rotifers) and all the support necessary for customers growing their own cultures. We are also experts in shipping logistics, however remote, to your location. Our commitment to excellence will keep you coming back to Reed Mariculture.

Reed Mariculture Inc.

1-877-732-3276

www.reed-mariculture.com

# N-Rich® Enrichment Solutions for Every Need

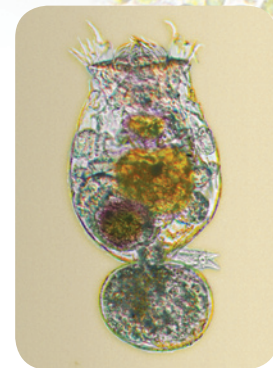
**Four standard blends to meet the needs of your hatchery:**

- |  |                        |
|--|------------------------|
| 1 All-in-One rotifer feed and enrichment:    | <b>RotiGrow Plus</b>   |
| 2 Gentle overnight, high protein enrichment: | <b>N-Rich High PRO</b> |
| 3 Rapid/high HUFA, high protein enrichment:  | <b>N-Rich PL Plus</b>  |
| 4 Very high HUFA enrichment:                 | <b>N-Rich Ultra PL</b> |

*Special needs? Custom blends available on short notice.*

**N-Rich offers:**

- **Complete Enrichment** — “Whole-cell, Whole-food” nutrition for rotifers and artemia. 100 percent of biomass from microalgae
- **Bioavailable Nutrients from Microalgae** — Vitamins, minerals carotenoids and enzymes
- **Optimum Lipid Class** — Bioavailable phospholipids and other polar lipids make up nearly 50 percent of enrichment lipids for rapid rotifer tissue enrichment and gut-load nutrition
- **Concentrated, Clean, Liquid Form** — Exceptionally clean and easy to use with minimal foaming or clumping, which means less time spent maintaining cultures
- **Shelf life** — four months, refrigerated



Rotifer (*Brachionus plicatilis*) grown using RotiGrow algae

**The RotiGrow System**

A two-step rotifer feed and enrichment system employing two supplemental feeds that further enhance larval fish nutrition. All our feeds are produced using proprietary processes with 100 percent of the biomass composed of nutritionally rich blends of microalgae.

**STEP 1**

**RotiGrow and Nanno 3600™** — *Grow-out & Enrichment Feeds*

*Supports Pre-Enrichment and Higher Yields*

**Instant Algae** feeds are clean, high-yield rotifer feeds that provide pre-enrichment with high levels of polar lipid DHA, EPA and ARA, and also provide essential vitamins and carotenoids.

**STEP 2**

**N-Rich™**

*Full HUFA and vitamin enrichment plus “Whole-Cell” Nutrition*

**N-Rich** offers a unique blend of microalgae that provides a wide spectrum of essential nutrients, including high levels of protein, carotenoids, sterols and optimized vitamins C, A and D. **N-Rich** can raise the nutritional profile of enriched rotifers to meet the needs of any fish.

*(See Rotifer Comparison Table on reverse)*

**Additional Products for Nutrition Enhancements:**

**STEP 3**

**Cold storage and/or Gut Loading with N-Rich**

*Digestive and “Whole-Cell” Nutritional Support for Larval Fish*

**N-Rich High PRO** is a nutritionally balanced rotifer finishing feed that is easily digested when released into fish larval guts. It contains a blend of microalgae including *Pavlova* and *Isochrysis*. **N-Rich High PRO** offers an optimal fatty acid profile, plus carotenoids, sterols and the right amounts of vitamins A, D and C.

**STEP 4**

**RotiGreen™** — *Greenwater: Isochrysis, Nannochloropsis and DHA/EPA blends*  
**Greenwater to Promote Overall Fish Health**

**RotiGreen** greenwater (**RotiGreen Iso**, **RotiGreen Nanno** and **RotiGreen Omega**) further supports rotifer and larval nutrition in the larval tank to promote health and enhance survival.

**No other feeds are closer to nature or better for your rotifer, fish, and hatchery productivity.**

## Technical Data

### PHYSICAL DESCRIPTION/PROPERTIES:

Description:

**Concentrated Blend of Microalgae**

Appearance:

**Brown Viscous Liquid**

Algal size: **2-10 microns**

Microalgal Biomass:

**High PRO and PL Plus 9%**

**Ultra PL 10%**

Dry Weight: (all formulas) **9%**

## Packaging

1 Quart Bottle



10 Liter Cubitainer®



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# N-Rich® Enrichment Solutions for Every Need

## FEED & DIRECTIONS

### Directions for use:\*

A six-hour enrichment at 1,000 rotifers/ml is standard. Enrichment can be as short as 1 hour or longer than 8 hours depending on the enrichment target. Carefully monitor dissolved oxygen and maintain near saturation (above 16% partial pressure or 7ppm). Rinsing rotifers is usually not necessary. More protocol information at [www.rotifersolutions.com](http://www.rotifersolutions.com).

### Batch feeding doses:

1. Feed directly to the enrichment tank once every 3 hours.
2. Premixing is not necessary. DO NOT BLEND. Blending may damage algal cells.

### Continuous feeding (preferred method):

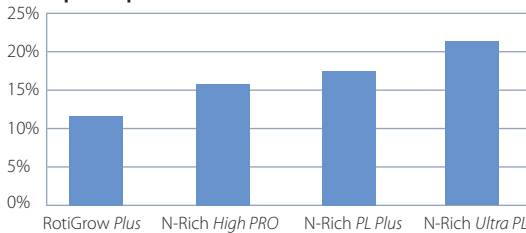
1. Feed directly to the enrichment tank with a peristaltic pump.
2. N-Rich may be diluted with clean seawater and suspended with minimal aeration or "mini" aquarium pump.
3. Keep the feed chilled in an ice chest or small refrigerator.

Feed Rate	Batch Processing			Continuous Feeding (per hour)
	Start	At Hour 3	At Hour 6	
Moderate	0.4ml / liter	0.4ml / liter	0.4ml / liter	0.13 ml / liter
Strong	0.6ml / liter	0.6ml / liter	0.6ml / liter	0.2 ml / liter
Maintenance feeding	0.25ml / liter	0.25ml / liter	0.25ml / liter	0.08 ml / liter

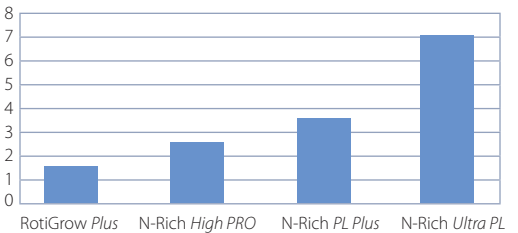
## Choosing the right enrichment and dose:

Rotifer lipid content with 6 hour enrichment from RotiGrow Plus base (see rotifersolution.com for more options)

### Lipid as percent of rotifer biomass



### DHA:EPA Ratio



## BIOMASS COMPOSITION

N-Rich	High PRO	PL Plus	Ultra PL
Applications	Moderate HUFA; overnight gut-load maintenance	Overnight 2-6 hr enrichment	Extreme DHA 2 hr enrichment
Composition of Biomass			
Lipid (% of Biomass)	35%	44%	66%
DHA (% of lipids)	37%	41%	44%
EPA	5%	2%	0.5%
ARA	1.0%	1.0%	1.2%
Total HUFAs	45%	45%	48%
Protein	38%	32%	18%
Carbohydrate	19%	15%	7%
Ash	8%	9%	10%
<b>Dry weight Biomass</b>	<b>9%</b>	<b>9%</b>	<b>9%</b>

\* Standard doses are for the RMI 165 micron (0.18ng/rotifer) L-Type rotifer. Adjust dosage if your rotifers are larger or smaller. For enriching rotifers at densities up to 3,000 per ml increase feeding proportional to density.

## Technical Assistance:

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## Distributor: