



ARTEMIA FROM THE HIGH DESERT

Overview

Great Salt Lake Artemia (GSLA) harvests artemia from the Great Salt Lake in the U.S. and is the industry expert, with over 30 years in the industry producing leading brands.

GSLA Artemia provides high quality Artemia with no chemical enhancement requirements and a wide temperature range for easy processing. Artemia from the Great Salt Lake in the U.S. is smaller in size than other artemia varieties. This helps provide the opportunity to further improve your hatcherie's performance by

feeding artemia to the PL earlier in the life-cycle, improving growth and survivability.

With these advantages, hatcheries can use higher levels of live artemia in their feeding program earlier in development to deliver higher survivability, healthier shrimp/fish—and higher profits.

Great Salt Lake Artemia is committed to the conservation of our natural resources through responsible harvesting. We work closely with local governments, scientists and conservation groups to ensure a stable artemia supply while making sure all the lake's wildlife continues to thrive and grow.

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Artemia Handling Instructions

- Package should be kept closed and sealed.
- For optimal storage keep in cool, dry place.
- Temperatures above 4°C can influence the quality of the product.
- Once opened, the product should be used immediately or stored at or below 4° C.

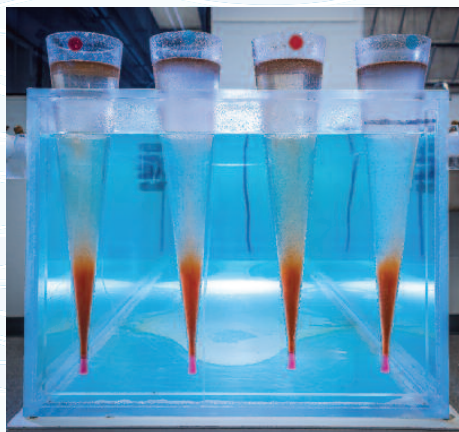
Artemia Hatching Instructions

Tank Preparation

1. Take out all removable parts (pipes etc.) and clean them separately with soap, rinse and disinfect by immersion in chlorine solution (150ppm) or other commercial products such as Virkon, Sanocare PUR, etc., as directed.
2. Brush the tank thoroughly with soap after rinsing.
3. Repeat exercise with bleach solution.
4. Rinse extensively with water and fill the tank with filtered sea water. Make sure that all cysts and cyst shells are removed (e.g. remaining in outlet and in valves of the tank)
5. Disinfect the hatching water with e.g. 10 ppm active chlorine and aerate gently for ±1 hour.
6. Deactivate any remaining chlorine by adding 8 ppm sodium thiosulphate (Na₂S₂O₃).

Hatching Artemia

1. Hatching tank: 1.000-L
2. Volume: 800-L



3. Diluted seawater at 25–35 ppt salinity
4. Hatching density: 2.5g/L
5. TEMPERATURE: 28°C to 31°C. **DO NOT exceed 31°C**
6. pH > 8.0 – pH should be 8 – 8.5 during the entire hatching process.
7. If necessary, add dissolved sodium bicarbonate or carbonate (preferably add bicarbonate half an hour before incubation)
 - a) Immediately before adding the cysts add also 120ppm of NaOH
 - b) In general, a second dose of 120ppm of NaOH will be necessary at T12
8. Continuous aeration (D.O. > 4 mg/L)
9. Continuous light (artificial or natural) – minimum 2,000 lux at water surface
10. Once hatching is complete allow the contents of the hatching tank to run through the separator and to collect the outflowing Artemia nauplii in a submerged net
11. After harvesting rinse the nauplii



Quality and Testing

Harvesting and Processing

Our products are harvested using proprietary, state of the art harvest equipment to ensure our freshly harvested cysts are treated properly and maintain optimal hatching.

Cysts are immediately treated at our pre-processing facilities located on the shores of Great Salt Lake, where they are cleaned and conditioned. Subsequently our cysts are transferred to freezer facilities for further conditioning, acclimatization and subsequent processing using proprietary processing techniques. These techniques are specifically tailored to every batch of cysts taking into account the time of harvest, level and stage dormancy and ecological parameters.



Quality & Testing

Throughout this process, our batches are carefully sampled and tested multiple times in order to properly time each phase of production and maximize the hatching quality and shelf life of our products. After final processing and packaging, our batches undergo additional testing using proprietary imaging technology to ensure all hatching characteristics comply with our stringent quality standards.

Great Salt Lake Artemia applies a scientific approach to testing which ensures we can deliver a top-quality product with reliable hatching.

Our scientists have more than 100 years of combined experience researching and testing lake ecology, Artemia biology, and Artemia harvesting and processing. As such, our team developed the most sophisticated testing and production techniques based on the biological and ecological characteristics of the live Artemia embryo.

Our proprietary imaging technology developed by our team of scientists permits us to test each batch multiple times using large sample sizes in order to guarantee accurate and precise determination of hatching quality parameters.

Finally, we use an industry appropriate statistical approach to assign a final grade to a batch of cysts. We do not apply average hatching quality to determine the appropriate grade

for a batch of cysts. Rather, we use statistical lower confidence limits at the 99% level. This ensures that our cysts hatch at or above the certified rates. In short, if you buy 80% grade GSAL Artemia, you will experience hatch rates above 80%.

Artemia QA Testing

Great Salt Lake Artemia is committed to the biosecurity of our customers' operations and, to support that, we thoroughly test all our product. GSAL is proud to say we have over 14 years of testing and never had a positive test for any pathogen. We attribute this success to our commitment to Quality Control and our geographic isolation.

We Test:

WSSV

White spot disease
White spot syndrome virus

IHHNV

Runt-deformity syndrome
Infectious Hypodermal and Haematopoietic Necrosis Virus

TSV

Taura syndrome
Taura syndrome virus

YHV

Yellow head disease
Yellow head virus

IMNV

Infectious myonecrosis disease
Infectious myonecrosis virus

PvNV

Penaeus vannamei nodavirus disease
Penaeus vannamei nodavirus

MrNV

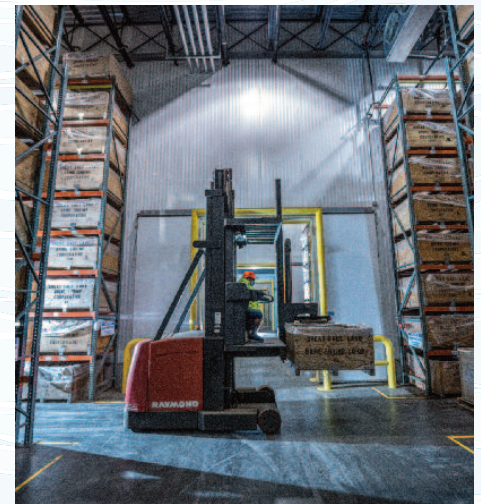
White tail disease
Macrobrachium rosenbergii nodavirus

DIV1

Shrimp hemocyte iridescent virus disease (SHIV) 1
Decapod iridescent virus 1

MBV

Baculo virus disease
P. monodon baculovirus



Other Testing

- Bacterial testing
 - Salmonella
 - E. coli
 - Bacillus cereus
 - Vibrio harveyi
 - AHPND/EMS
 - NHP-B
- Fungal testing
- Test for chemicals, contaminants and heavy metals
- Overall, 82 tests for potentially harmful or disruptive agents



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ARTEMIA

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