INVE AQUACULTURE
REGULAR CYSTS

THE STANDARD ARTEMIA FOR MARINE FISH AND SHRIMP HATCHERIES

SELECTED ACCORDING TO HATCHING CHARACTERISTICS
EASY TO HATCH
CONSISTENT HATCHING EFFICIENCY
EASY TO ENRICH AND OBTAIN CONSISTENT ENRICHMENT LEVELS
CERTIFIED OUTPUT

REGULAR CYSTS
INVE developed the concept and brands of regular cysts more than 30 years ago. Cysts are classified according to their characteristics such as hatching efficiency, speed of development and enrichment.

INVE regular cysts are harvested from successfully controlled harvesting sites and are selected for their constant supply of high quality product.

EG Artemia are non-enhanced cysts that hatch readily without the need for a specific treatment during hatching.
**EG Artemia**

**PRODUCT DESCRIPTION**

INVE Aquaculture offers a wide and specialized range of top quality Artemia cysts from sustainably harvested sources. Our vision is not to market Artemia as a simple commodity, but as a range of advanced and innovative products with specific characteristics and groundbreaking technological innovations that meet the highest productivity and biosecurity standards.

Non-enhanced cysts were the first Artemia products to be used in aquaculture. Due to their consistency throughout the years, standard working procedures could be established at large scale in hatcheries.

**EG Artemia** is available with **SEP-Art** technology, for easy separation of pure nauplii; and **D-FENSE**, for Vibri control during hatching providing higher biosecurity standards in hatcheries.

**APPLICATION**

EG cysts are the standard for larval fish and crustacean juveniles either as first live feed (shrimp) or after several days of rotifer & specialty Artemia feeding (marine fish). EG type of product is easy to enrich and can be easily boosted with nutritional components that are essential for the successful larviculture production of marine fish and shrimp.

Artemia nauplii are either fed directly to larvae at Instar I or further nutritionally enriched.

**Typical feeding protocols indicating in which phase Artemia is fed**

<table>
<thead>
<tr>
<th>L. vannamei</th>
<th>Probiotics</th>
<th>Algae</th>
<th>Enriched Rotifers</th>
<th>Artemia</th>
<th>Enriched Artemia EG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sanofine® MIC F</td>
<td>2-32 days</td>
<td>2-32 days</td>
<td>3-39 days</td>
<td>3-30 days</td>
<td>20 - 51 days</td>
</tr>
<tr>
<td>Sanafine® GWS</td>
<td>3-29 days</td>
<td>3-30 days</td>
<td>3-30 days</td>
<td>3-30 days</td>
<td>20 - 51 days</td>
</tr>
<tr>
<td>Sanoalife® MCF</td>
<td>0 - 5 days</td>
<td>0 - 5 days</td>
<td>0 - 5 days</td>
<td>0 - 5 days</td>
<td>0 - 5 days</td>
</tr>
<tr>
<td>Sanoalife® GWS</td>
<td>7-18 days</td>
<td>7-18 days</td>
<td>7-18 days</td>
<td>7-18 days</td>
<td>7-18 days</td>
</tr>
</tbody>
</table>

**General parameters for optimal Artemia hatching**

1. Check the temperature of the water in the hatching tank prior to hatching
2. Aerate vigorously
3. Add the required amount of cysts into the hatching tank
4. Rinse the tank walls
5. Rinse and repeat exercise with bleach solution
6. Rinse again extensively with water and fill the tank with filtered sea water. Make sure that all cysts and cystshells are removed (e.g. remaining in outlet and in valves of the tank)
7. Disinfect the hatching water with e.g. 10 ppm active chlorine and aerate gently for ±1 hour
8. Deactivate any remaining chlorine by adding 8 ppm sodium thiosulphate

**Start of hatching**

EG Artemia cysts hatch optimally if the parameters listed below are respected.

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2. Aerate vigorously
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**Optimal hatching**

**Tank shape:** Cylindrical-conical or U/V-shaped

**Aeration:** Open ended or perforated PVC pipe

**Salinity** | **Temperature** | **Light** | **pH** | **Cyst density** | **Oxygen**
---|---|---|---|---|---
25-30 ppt | 29°C | 2000 Lux | 8-8.5 | 2-3 g/l | ≥4 ppm

**End of hatching**

Hatching is ended when the highest number of nauplii are obtained, normally hatching should be terminated within 18-24 h. Subsequently the nauplii can be harvested, rinsed and restocked to enrich.

However, since Artemia is a living organism and cysts are collected from a natural environment, incubation time might change from year to year. For further information contact your local INVE representative.

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**To the best of our knowledge, the technical data in this technical card is accurate and reliable as of the date of publication. We do not assume any liability for the accuracy and completeness of the above information. Please inspect and test our products in order to satisfy yourself as to the suitability of the products to their particular purpose.**

For more information, please contact your local INVE Aquaculture Service Center or take a minute to visit our free Artemia knowledge hub:

http://artemia.inveaquaculture.com