

JBL

Artemia

Make your own
live food!

With JBL Artemio[®]-system
- really simple!





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What are Artemia?

Almost every child and every fishkeeper has heard the term Artemia or “brine shrimp” but very few know exactly what this refers to.

Artemia Salina is a species of small shrimp which live in salt lakes – hence the common name “brine shrimp”. Due to their life in the salt lakes, the Artemia shrimp have developed a special life cycle which makes them interesting for the fish-keeping world: Provided that salt water is available, the shrimp grow to become adult shrimp which can breed and lay eggs. If the lakes dry up, (which is frequently the case for salt lakes), the eggs survive the dry spell and the young shrimp (nauplii) hatch



when water is once again available for the eggs. The eggs (0.2 mm in size) can therefore be stored for up to a year in dry conditions. As soon as the eggs are put into salty water, the young shrimp hatch, providing a highly nutritious food, especially for young fish.

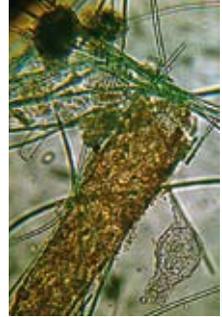
This strategy has ensured the survival of Artemia on earth for over 100 million years and so Artemia species are still to be found in salty inland lakes in varying regions of the earth today, but not in the sea.

Why do you need Artemia?

A good dry food such as JBL NovoBel contains seven types of flake each with 30 to 50 ingredients. But even this variety is not sufficient for some fish: They require even more variation in their diet, including live food! Only through supplementary feeding with



(known as infusoria) or unicellular algae before moving on to Artemia nauplii.



Artemia has it been possible to breed some species of fish and it is only Artemia that has enabled some species to be kept successfully in an aquarium.



Artemia play a particularly important role in the breeding of fish: The freshly hatched fry of some egg-laying species

are often so small that they are unable to feed on dried food, whereas Artemia nauplii (freshly hatched Artemia) are exactly the right size and have a very high nutritional value.

For a minute number of species, even the Artemia nauplii are too large and they initially feed on single-celled organisms



How are Artemia cultivated?

Basically the dry Artemia eggs are put into salt water, aerated and left for 24 – 48 hours, until the small Artemia nauplii hatch. The salt water containing the shrimp is poured through a fine sieve and the shrimp are fed to the fish without the water. The JBL ArtemioSet has been designed to make Artemia cultivation easy and effective.

When cultivating the shrimp, there are a few points to bear in mind:

- Do not use too many Artemia eggs: 1 g eggs produces 150,000 nauplii! JBL ArtemioPur contains extremely high quality eggs with an excellent hatch rate.
- Salt: For best results, a special saline salt such as JBL ArtemioSal should be used. Never use cooking salt containing iodine.
- Salt content: 10 – 15 g salt (3 dosage spoons) should be dissolved for every 0.5 litres water.
- Temperature has a decisive influence on the hatching time. At 25 °C it takes approx. 24 hours for hatching to start. At lower temperatures it takes longer.
- The nauplii have the highest nutritional value immediately after hatching. They should therefore be used as food as soon as possible!



How are Artemia cultivated?

- To use the nauplii as food, switch off the air supply and wait for a few minutes. The empty egg cases float to the surface and the live nauplii collect on the bottom. Simply turn the outlet tap and allow the required amount of nauplii to run through the Artemia sieve (JBL Artemio 3) into the harvesting container (JBL Artemio 2).

The Artemia nauplii are retained in the sieve, whilst the salt water is collected in the container and can be re-used.



- Briefly rinse the Artemia nauplii in fresh water and then feed to your fish.
- The JBL ArtemioSet contains all the components (except for the Artemia eggs and the salt), which are needed for the Artemia culture described above: 1 funnel-shaped brood container,



How are Artemia cultivated?

1 stand for the brood container, 1 aerator pump with 1.8 m air hose, 1 harvesting container with Artemia sieve (0.15 mm mesh) and a non-return valve for the air supply. If you need larger quantities of Artemia or wish to feed newly hatched nauplii every day, more brood containers can be connected to the first JBL ArtemioSet brood container. The airtight construction allows air to flow from one container to the next, therefore only one aerator pump is required.



Can you rear Artemia?

Rearing Artemia is no problem at all and adult Artemia are a real treat for larger fish, even if their nutritional value is lower than that of freshly hatched nauplii.

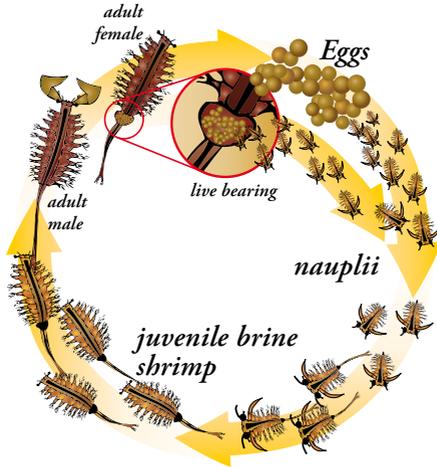
In order to rear Artemia, a very small portion of hatched nauplii are placed in a separate container with a large surface (a small aquarium). Due to the large surface, the water absorbs sufficient oxygen and does not require any extra aeration. To maintain a constant salt level in the water, it is helpful to mark the level of the water at the outset. The water can then be regularly topped up to this mark to replace the evaporated water.

The growing Artemia require a special algae liquid food (JBL ArtemioFluid) several times a day. Please ensure that the nauplii are not given more food than they can consume in a few hours, as the water will otherwise become polluted and the nauplii will not survive.

At a water temperature of 28 °C the shrimp

become sexually mature within 12 days; at 20 °C it takes six to ten days longer. It is interesting to note that when male and female

adult shrimp are present, mating can be observed. However, when only female shrimp are reared Artemia can also reproduce by means of parthenogenesis.



The JBL Artemio range:



JBL ArtemioSet

Breeding set for *Artemia nauplii*

Live food home-grown in 24 hours.

- Complete cultivation equipment with stand, air pump and 1.8 m air hose.
- Harvesting container and Artemia sieve (0.15 mm mesh) also included.
- The container has been skilfully designed to allow the air from the aerating pump to be fed to further breeding containers.
- Funnel shape ensures constant movement of all nauplii.



JBL Artemio 1

Extension for ArtemioSet

- Complete breeding container as in Artemio-Set, but without air pump and hose.
- Includes stand which can be firmly connected to other Artemio stands.
- Wall-mounting optional.
- Also with facility to link air flow to further breeding containers.



The JBL Artemio range:



JBL Artemio 2 Harvesting container for Artemio

- Transparent harvesting container from sturdy plastic.
- Artemia sieve (JBL Artemio 3) and sieve set (JBL Artemio 4) exactly fit onto upper opening.
- Also suitable for other types of live food.



JBL Artemio 3 Artemia sieve

- Mesh size 0.15 mm.
- Catches Artemia nauplii and lets saltwater run through.
- Fits exactly on harvesting container (JBL Artemio 2).
- Also suitable for other types of live food.



JBL Artemio 4 Sieve combination for live food

- 4 top quality sieves to separate live food from transport water.
- Sieve sizes: 0.15 mm, 0.30 mm, 0.60 mm and 1.00 mm.
- Perfect for Artemia, mosquito larvae, Tubifex, Mysis, water fleas etc.
- All sieves, used in succession, separate live food, e.g. water fleas, into different sizes to feed different sizes of fish according to their needs.



JBL ArtemioMix

Artemia ready-mix (eggs/salt)

- A ready-mix comprised of saline shrimp eggs with salt and micro-algae to feed the shrimps.
- Simply add 3 measuring spoonfuls (included) to 0.5 l mains water.
- Salt contains buffer system for optimum pH level of the water.
- Saline shrimp hatch after 24 – 36 hours.
- 230 g ready-mix for 14 applications of 0.5 l each.



JBL ArtemioPur

Artemia eggs (top quality)

- Home-grown live food: put the eggs into saltwater and you have your own live food after 24 hours.
- Top quality Artemia eggs with maximum hatching rate.
- Packed using nitrogen to guarantee hatching rate even after long storage.
- Includes practical dosage spoon.



JBL ArtemioSal

Special salt with micro algae for cultivating Artemia

- 230 g salt for 7 litres culture solution.
- Contains phytoplankton (micro algae) to feed Artemia nauplii after the egg cases have been depleted.
- A special buffer system maintains the optimum pH level of the water, which must not drop too low.
- Dissolves easily, simple to use.



JBL ArtemioFluid

Liquid food for Artemia nauplii

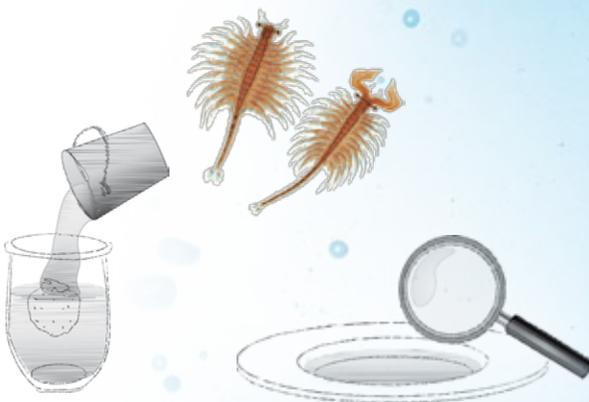
- Liquid food comprised of ultra-fine homogenised phytoplankton (algae) and other vital nutrients for breeding Artemia nauplii.
- Simply add to the water a drop at a time.
- Light green colouring of the water indicates the right amount of food. More food should be given when the water is clear again.



JBL ArtemioKidSet

Artemia breeding set with aquarium and all accessories

- With top-quality acrylic aquarium (content 8 litres, dimensions: 33 cm x 19.5 cm x 22 cm).
- Includes JBL Artemio Kid (ready-mixed Artemia egg/salt mixture), JBL ArtemioFluid (liquid food for the shrimp), JBL ArtemioSal special salt for water changes), fishing net.
- Simple, detailed instructions.
- Decorative gift pack.



JBL ArtemioKid

Children's ready-mix set for primeval shrimp

- Ready-mix comprised of special salt and Artemia eggs.
- Larvae (nauplii) hatch after 24 – 48 hours.
- Ready-mix for 7 - 8 litres of water.
- Easy to use mixture for children to cultivate saline shrimp.
- Must be fed with JBL ArtemioFluid after hatching.
- Contents: 230 g (Artemia eggs/ salt mixture)

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*Your specialist aquarium supplier
will gladly advise you and
recommend further literature.*

JBL-Info-BROCHURES
*are available from your aquarium supplier
on other aspects of aquarium-keeping.*

Your specialist supplier

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