Hatching Brine Shrimp -

Baby Brine Shrimp (Artemia nauplii) are an excellent first food for the fry of many different species of fresh water fish. They contain nearly all the essential fatty acids and enzymes necessary for fast, healthy growth of young fry. Also, considering that they contain around 40% Protein and remain actively swimming for up to an hour in fresh water, they are obviously better than prepared foods such as liquifry and powder foods. The only hard part with baby brine shrimp is to hatch them and then separate the hatched babies from the egg shells. By observing the steps outlined in the following and overleaf, obtaining fresh baby brine shrimp for your fish fry will be made less difficult.

PREPARATION:

- Obtain a common plastic soft drink bottle (either 1.25 or 1.5 litre) and remove the label.
- Fill this bottle with approximately 1 litre of tap water.
- To this, add 1 table spoon of rock salt and half a tea spoon of sodium bicarbonate (pH up powder).
- Insert an airline hose from a small air pump (pumping as much air as possible) making sure that it reaches the bottom of the bottle. Don't use an air stone, because the bubbles are too fine.
- Place the bottle near plenty of light.

HATCHING:

After half an hour, most of the salt should have dissolved. To this solution, add no more than half a tea spoon of Brine Shrimp Eggs, less if you have only a few fish to feed. Shake the bottle gently after about an hour to ensure that all the eggs are in motion.

At temperatures of around 20°C to 30°C, the eggs will take about 24 hours to hatch. At this time, the aeration is at its most critical. The aeration should not be turned off for more than half an hour at a time.

SEPARATION: *SHRIMPERY METHOD:*

Staff at AQUOTIX can show you what a shrimpery is and how to use it. Basically you pour in the contents of the bottle into the shrimpery after the shrimp have hatched. Place the cover on, fill the clear jar with aquarium water and place into the cover. Tap the jar once or twice to ensure that there are no air bubbles blocking the little hole. After half an hour, the jar should have shrimp in it (they are attracted to the light). Tip the contents of the jar into the aquarium for your baby fish. It would be advisable to aerate the shrimpery for five minutes every hour to prevent the shrimp from suffocating, but remove the aeration while trying to catch shrimp in the jar.

SEPARATION: *MANUAL METHOD:*

Pour the contents of the bottle into a small bowl and allow to settle for five minutes. Any un-hatched eggs will settle on the bottom of the bowl, and all of the empty shells of the hatched shrimp will float on top. All of the hatched baby shrimp (orange in colour) will be swimming in between. Siphon these shrimp off (use airline tubing) through a fine cloth, and dip the cloth into the tank containing the fish fry.

TIP: Start a new culture every day. The younger the baby shrimp are, the better!

The following information on the next page is intended for the more serious hobbyist or for those people who are fed up with brine shrimp egg shells floating in their tanks.

DECAPSULATION OF BRINE SHRIMP EGGS

Complete separation of Artemia nauplii from their shells is not always possible by normal hatching methods. These shells, when ingested by fry, can not be digested and may cause an obstruction in the gut. The hard dark brown external layer of the cyst (or egg), called the chorion, can be removed without affecting the viability of the embryo by the short term exposure of the cysts to a hypochlorite solution (bleach). This procedure is called cyst de-capsulation.

The following example is intended for approximately 2 teaspoons of dry cysts:

Artemia cysts are in a dehydrated state when purchased. Complete removal of the chorion can only be performed when the cysts are fully hydrated.

Full hydration can be reached by soaking the cysts in warm fresh water for about 2 hours. It would be recommended to agitate the cysts to assure even hydration among cysts. Drain the water and immediately place the hydrated cysts into approximately 200ml of salt water. To this add approximately 200ml of 3-5% hypochlorite solution. Mix the contents thoroughly for 5 seconds every 30 seconds for approximately 10 minutes.

The cysts will change colour from brown through white to orange. As soon as the cysts become orange, drain the liquid and immediately add fresh water with substantial amounts of sodium thiosulphate (de-chlorinator). Drain and repeat step 3 until no more chlorine can be smelt, then rinse with straight fresh water.

Hydrated, de-capsulated cysts can be stored in the refrigerator for several days, or they can be dehydrated in (and stored in) brine (saturated salt solution) for a long period of time. In their de-capsulated state, they can be introduced directly as a food source or hatched as per normal (see above), without having to separate the nauplii from the shells.