KALEIDO AQUATICS
LOCALLY BRED FISH, SHRIMP & AQUATIC PLANTS
SOMERSET WEST | BRINGING NATURE HOME
For a Brighter Aquarium

VINEGAR EEL STARTER CULTURE

A practical guide to establishing, maintaining and harvesting your own live-food culture



Welcome to Kaleido Aquatics!

Your starter culture contains live vinegar eels (*Turbatrix aceti*), tiny organisms that make an excellent food source for newly hatched and very small fish fry. Follow this guide to establish your own growing bottle, maintain your culture and harvest a regular supply of live food.

PART 1 – ESTABLISHING YOUR CULTURE

Prepare the bottle and culture medium

STEP 1 – Purchase your apple cider vinegar

Purchase naturally unfiltered apple cider vinegar containing *the mother*. This is available from most health shops. Look for a product labelled unfiltered and containing the mother.



Example of unfiltered apple cider vinegar containing the mother.

STEP 2 – Prepare your culture medium

Mix equal quantities of apple cider vinegar and aquarium water (a 1:1 ratio). For example, use **100 ml apple cider vinegar and 100 ml aquarium water**. The quantity you prepare will depend on the bottle you are using.

STEP 3 – Prepare your growing bottle

Use a clean glass bottle of approximately 350 ml or larger, with a long, narrow neck. The shape of the neck is important because it supports the filter wool and helps prevent it from slipping into the bottle. Add a few small pieces of fresh apple, preferably organic, with the skin left on. Cut a small wedge no larger than approximately 10 mm, remove the core and divide it into about four small pieces that will fit through the bottle neck.

STEP 4 – Add the culture medium

Pour your prepared apple cider vinegar and aquarium water mixture into the growing bottle. Measure the quantity needed for your particular bottle, leaving sufficient room for the 100 ml starter culture. After adding the starter culture, the combined liquid level should reach the lower part of the bottle neck, not close to overflowing.

STEP 5 – Introduce your starter culture

Gently pour the entire contents of your **100 ml Kaleido Aquatics starter container** into the growing bottle. Adjust the amount of culture medium beforehand so that, after adding the starter culture, the combined liquid level reaches the lower part of the bottle neck. It must leave adequate space above for the filter wool and freshwater layer; do not fill the bottle close to overflowing.

PART 1 – ESTABLISHING YOUR CULTURE (CONTINUED)

STEP 6 – Insert the filter wool

Roll a small quantity of filter wool into a firm, tight ball. Press it into the bottle neck until it rests on the surface of the culture medium. The filter wool forms a barrier between the vinegar culture below and the freshwater layer above. Make sure it is held securely in the neck.



The filter wool positioned in the bottle neck.

STEP 7 – Add the freshwater layer

Using a clean pipette, gently add aquarium water above the filter wool. Take care not to disturb the wool or mix the freshwater layer with the vinegar culture below.

STEP 8 – Provide ventilation

Air exchange is essential for a healthy vinegar eel culture. Our preferred method is to use the original metal screw cap, with five small ventilation holes drilled through it. Alternatively, a coarse, breathable hessian-type material can be secured over the bottle neck with an elastic band.



Example of a metal screw cap with five ventilation holes.

IMPORTANT: The combined liquid level should reach the lower part of the bottle neck, leaving space for the filter wool and freshwater layer. The bottle must not be close to overflowing.

PART 2 – ALLOWING YOUR CULTURE TO ESTABLISH

Keep your growing bottle at a reasonably stable room temperature, away from direct sunlight and excessive heat. After approximately one week, begin checking for vinegar eels in the freshwater layer above the filter wool. The timing can vary; look for visible activity rather than relying on a fixed number of days.

How to see them: Shine a bright light through the side of the bottle neck. Look for tiny, shimmering, moving organisms in the freshwater layer. Use a magnifying glass if necessary. Vinegar eels are extremely small and almost transparent. Once you can see a good population of moving eels, your culture is ready for harvesting.

PART 3 – HARVESTING YOUR VINEGAR EELS

Vinegar eels gradually migrate through the filter wool into the freshwater layer above.

Harvesting method

1. Shine a bright light through the bottle neck to check that a good quantity of eels has accumulated.
2. Using a clean pipette, draw up some of the eels from the freshwater layer above the filter wool.
3. Squirt the harvested eels directly into your fry aquarium.

After harvesting, gently replenish the freshwater layer using clean aquarium water and a pipette. Avoid disturbing the filter wool or mixing the freshwater layer with the vinegar culture below.

PART 4 – WHAT IF THE FILTER WOOL FALLS INTO THE BOTTLE?

Don't panic! Your culture can be recovered. If the filter wool slips into the bottle, follow these steps:

1. Carefully pour the contents of the bottle into a clean jug.
2. Use a pair of long tweezers to retrieve the filter wool from the bottle.
3. Clean the bottle.
4. Carefully pour the liquid contents from the jug back into the bottle.
5. Use the tweezers to return the small apple pieces to the bottle.
6. Gently squeeze the filter wool and roll it back into a firm ball.
7. Carefully press the wool into the bottle neck until it rests on the surface of the culture medium, as described in Step 6.
8. Replenish the freshwater layer using a clean pipette, as described in Step 7.

Take care not to lose the culture medium or disturb the vinegar eel population during this process.

PART 5 – MAINTAINING A CONTINUOUS SUPPLY

We recommend establishing TWO growing bottles. Having two cultures allows you to alternate harvesting and gives each bottle time to recover and replenish its population. In our own setup, we generally harvest two or three times per week, alternating between the two bottles. There is no need to harvest every day. Regular, moderate harvesting helps maintain a productive culture.

Vinegar eels are particularly useful for very small fry and can be alternated with freshly hatched baby brine shrimp (BBS) and live Daphnia as part of your fry-feeding routine.

CULTURE CARE – A FEW IMPORTANT TIPS

- Use clean aquarium water when preparing your 1:1 vinegar mixture.
- Use clean aquarium water to replenish the freshwater layer after harvesting.
- Keep cultures away from direct sunlight and excessive heat.
- Use a clean pipette when harvesting.
- Avoid disturbing the filter wool.
- Don't harvest excessively from one bottle.
- Maintain two growing bottles so that you can alternate harvesting.
- Keep a separate backup culture whenever possible.