

easyractor 4L

INSTRUCTIONS

COMPLETE KIT FOR
THE SEMI-AUTOMATED
ROTIFER CULTURE
FOR FEEDING
FISH LARVAE AND CORALS.

by

easy :[®]
reefs

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DESCRIPTION



easyractor 4L

Easyractor 4L is a bi-cylindrical truncated cone-shaped reactor, specifically designed for the semi-automatic culture of rotifer using our **Easyfeeder**, dosing pumps, and a differentiated mixture, according to the application for which it is intended, of different species of phytoplankton.

The use of the **Easyractor 4L** together with **Easyroti** as the feed for rotifer allows a continuous availability of feed for fish larvae and corals without relying on phytoplankton cultures.

Easyractor 4 L facilitates the production of rotifers by the aquarist in a simple and intuitive way, being able to simplify and guarantee the success of zooplankton cultures to improve the feeding of fish and corals, in a systematic, controlled and safe way.

- ▶ **The production capacity is 0.5 L of daily harvest for each cylinder, that is, in conditions of regular use, 600.000 rotifers can be harvested daily. There are no substantial differences in rotifer concentrations obtained between the use of live phytoplankton versus Easy Reefs phytoplankton.**

Easyroti for the production of rotifer for feeding fish larvae and corals.

Product Code: **ECTOR4L**



DISCOVER IT

WHAT MAKES EASYRACTOR 4L UNIQUE?



Easyractor 4L works with Easyroti.

Easyroti is a mixture of Easy Reefs® microalgae *Nannochloropsis* (80%) + *Tetraselmis* (20%) in the form of a fluid gel with a high microalgae concentration 5×10^9 cel/ml.

Easyroti does not need to be refrigerated.

This feature, together with the high concentration of microalgae it contains, makes it optimal to be used together with the **Easyractor 4L**.

The packaging format and dosage systems prevents the product from oxidation or

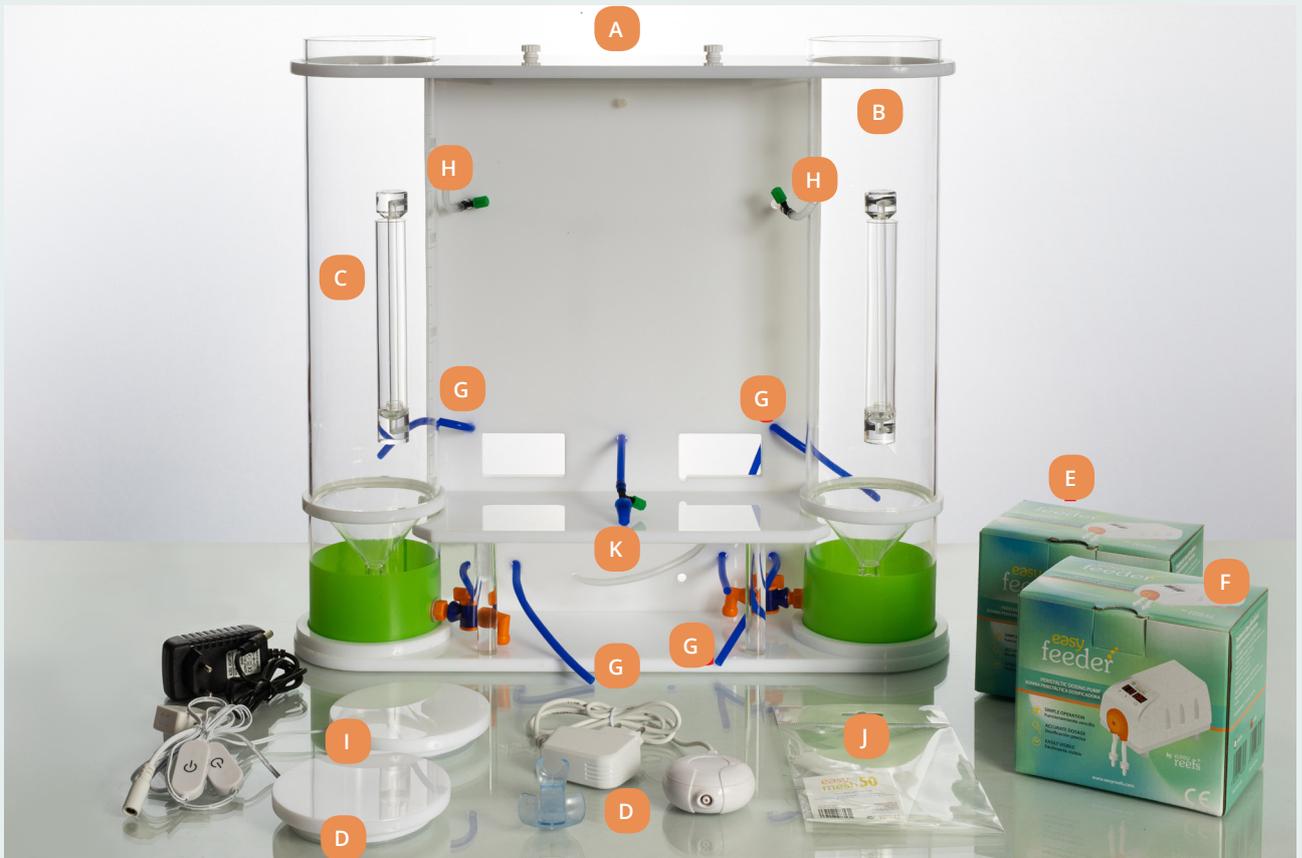
photochemical reactions produced by the exposure to light.

The automated dosing system of the **Easyractor 4L** allows the production of high concentrations of rotifers, reaching 900 rotifers/ml in ideal conditions, without the need of constant attention from the aquarist.

Easyractor 4L automated dosing maintains water quality by providing feed in a regular basis and in small quantities thus reducing algae consumption and ensuring availability for the rotifer at all times.

Easyractor 4L enables not to lose the culture if it is not possible to harvest during short periods, such as business trips, weekends, or short holidays.

✓ KIT CONTENTS



A

Methacrylate reactor support.

B

2 Truncated cone cylinders each with 2L capacity, equipped with a cleaning and discharge valve.

C

1 Aerator/feed diffuser.

D

1 Super Silent Air Pump with power supply included 220-240 V AC 1.0 W (see instructions inside the box).

E

1 Easyfeeder Master dosing pump with power supply included 110-230 V AC Output 12 V DC 1000 mA (see instructions inside the box).

F

1 Easyfeeder Slave dosing pump with DC Jack connector included (see instructions inside the box).

G

Pre-installation of feed dosing circuits.

H

Pre-installation of air circuit provided with a safety non-return valve.

I

2 Covers with LED light with power supply included 100-240 V AC Output 3 V DC (see instructions inside the box).

J

1 x 50-micron filter mesh.

K

1 Pre-installed Easyconnect 25 for the standardized connection with Easyroti from Easyreefs®

✓ INSTALLATION



Unscrew the screws on the cylinder fixing plate and remove it.



Position the reactor cylinders so that the outlet valve is in front position.
**** Be careful not to damage the valve when turning.

3 Place the fixing plate and reinstall the screws.

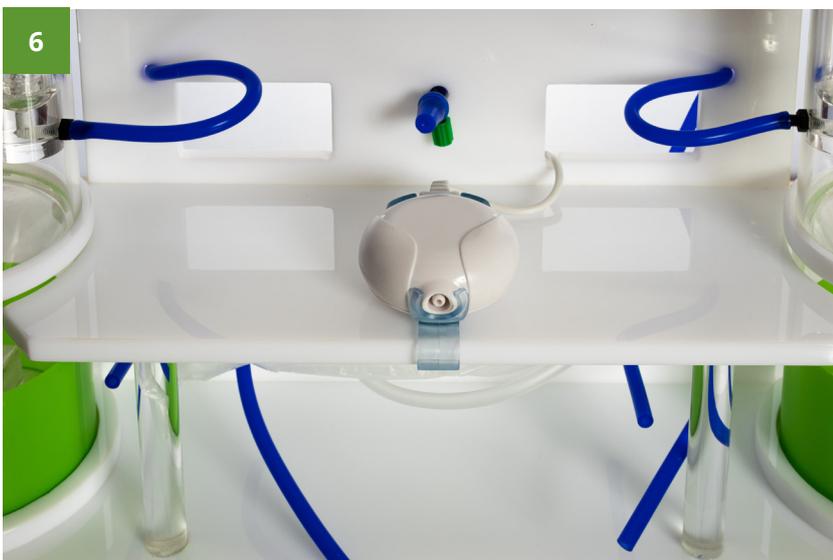


INSTALLATION

Insert the translucent ventilation tube into the upper connector of the left diffuser. Repeat for the right diffuser.



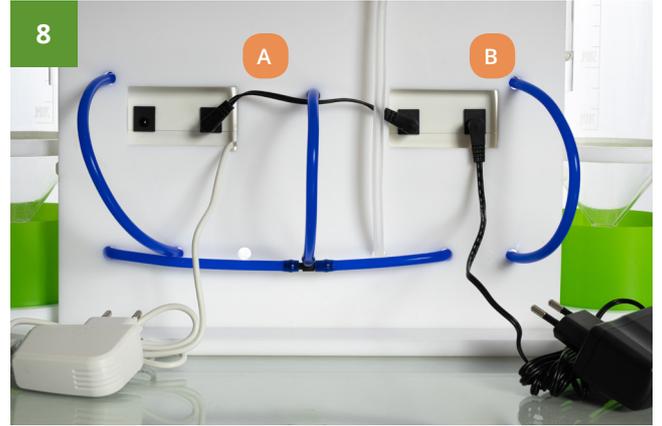
Insert the blue feed tube into the lower connector of the left diffuser. Repeat for the right diffuser.



Attach the clamp to the air compressor body and place it in the centre. Pass the power supply through the right window of the stand.



Place the Easyfeeder dosing pumps (Master and Slave) in their position. Calibrate the dosing pumps according to the instructions inside the box.



Install the connection DC Jack between the two Easyfeeders, and connect the power supply to one of the pumps.

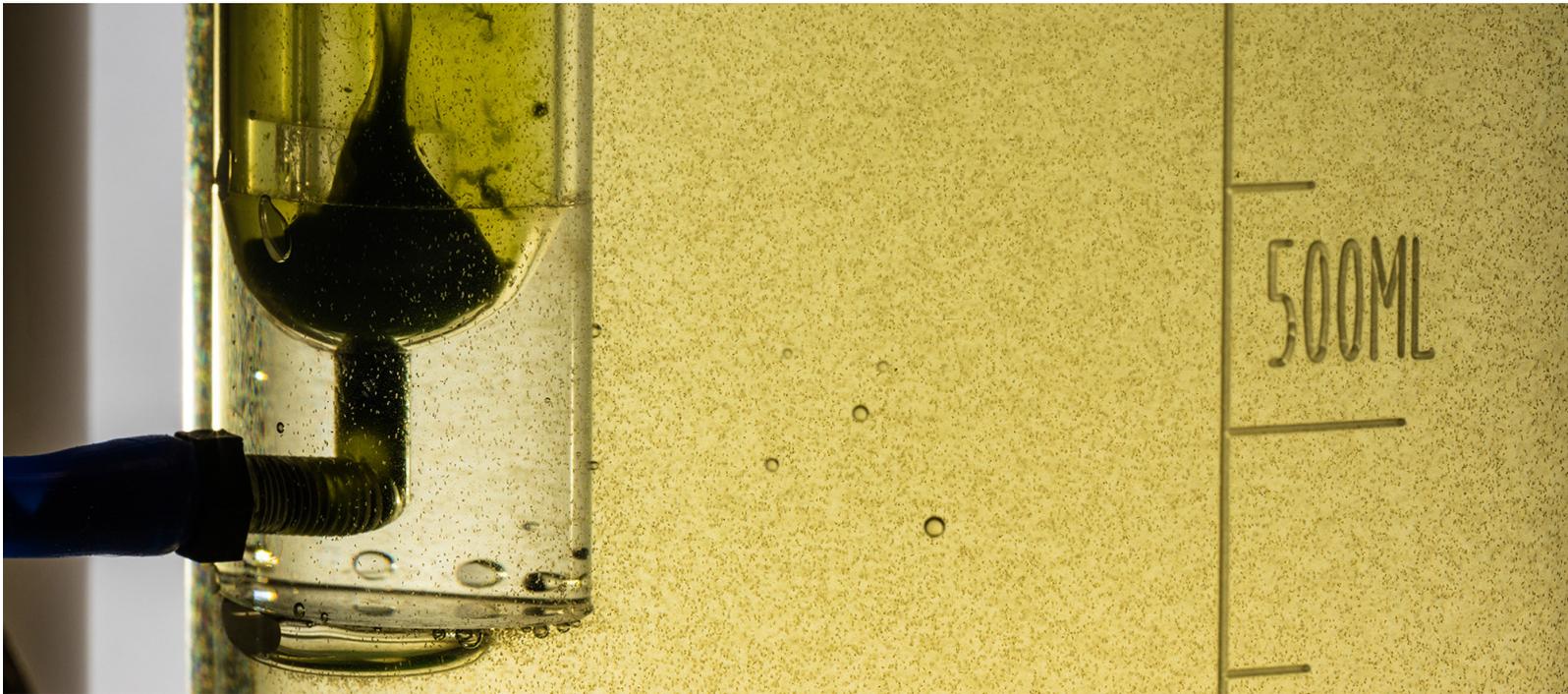


Once the pumps have been calibrated, connect the blue tube of the feed supply, maintaining the position shown in the picture.



Place the LED light covers as shown in the picture and the Easyractor 4L will be ready for operation..

✓ HOW TO USE



- Introduce 2 L of rotifer culture in each culture cylinder, at a density of 400 to 600 rotifers per millilitre.
- Adjust the air bubble in the diffuser capsule so that approximately 2 bubbles are produced per second.
- Make the air come out of the supply circuit, making sure that the Easyroti reaches the diffuser capsule (see Easyfeeder instructions).
- Initially set the dosing pump so that 1 ml of Easyroti is administered every 4 hours (6 ml/ 24 h).

✓ Under ideal conditions, we will be able to harvest 500 ml of rotifer culture from each cylinder every day.

✓ To filter the rotifer it is necessary to use a 50 microns mesh, Easymesh 50 (50 µm).

✓ The volume of the culture harvested must be replaced with seawater adjusted to the appropriate salinity. We will refer to "sea water" as the water prepared with salts for aquariums at a density of 1019-1022 (30 – 33 g/L).

✓ **Never use** aquarium water for the culture. The presence of organisms and contaminants from the aquarium can quickly spoil it.

✓ The temperature of the culture should be maintained between 20-28°C, optimally at 24°C.

✓ Clean and sterilize the culture cylinders every 7 days.



CLEANING AND STERILIZATION PROCEDURE

1. Pour the rotifer culture into a gently aerated recipient to keep it stable while cleaning the reactor.
2. Close the air valve and stop the dosing pump of the cylinder that we are going to clean.
3. Remove the cylinder from its location for cleaning.
4. Remove any dirt that may have settled on the various surfaces of the reactor cylinder with pressurised water. **Do not use abrasive materials or chemicals that may alter the surface or integrity of the methacrylate.**
5. Once the culture has been emptied, fill it with tap water and add the amount of bleach indicated in the table, this will depend on the active chlorine in the bleach.
6. Leave for at least 12 hours.

	CONCENTRATION OF THE BLEACH REPRESENTED ON THE LABEL AS ACTIVE CHLORINE				
	30 g/L (3%)	33 g/L (3.3%)	35 g/L (3.5%)	37 g/L (3.7%)	40 g/L (4%)
VOLUME OF BLEACH TO BE ADDED	13.4 ml	12 ml	11.4 ml	10.8 ml	10 ml

VERY IMPORTANT: The bleach must be of **food grade quality**. These are usually marketed as “suitable for drinking water disinfection”.

7. Empty the cylinder, rinse it thoroughly with tap water, and dry it with a soft cloth to prevent any remaining bleach traces.
8. Place the cylinders in their original position, and connect the aeration and feed supply tubes.
9. Introduce 1.5 L of the culture back into the cylinder, filter the remaining 500 ml through the Easymesh 50 and incorporate the rotifers into the culture. Fill up with freshly prepared water until reaching the initial 2 L.
10. Restore the initial conditions for the aeration and feeding of the culture.

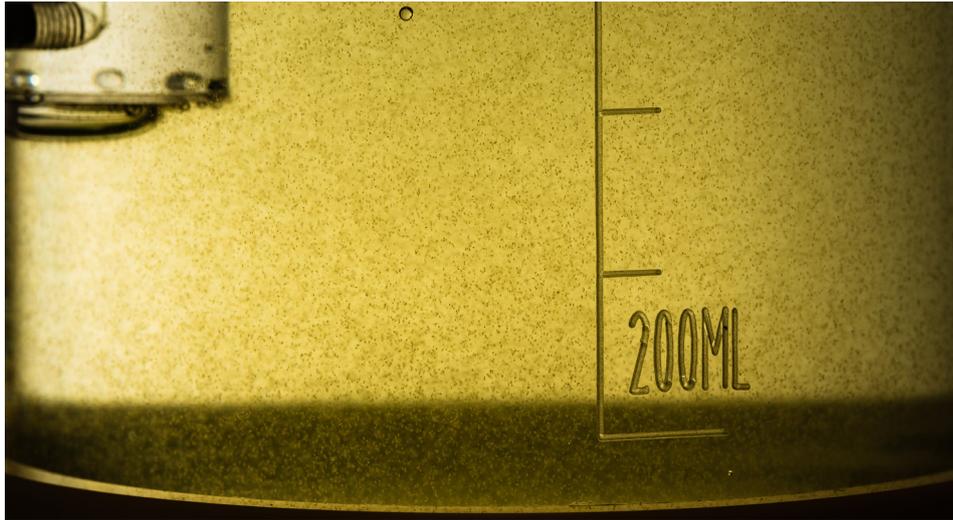


DOSAGE AND ADJUSTMENTS

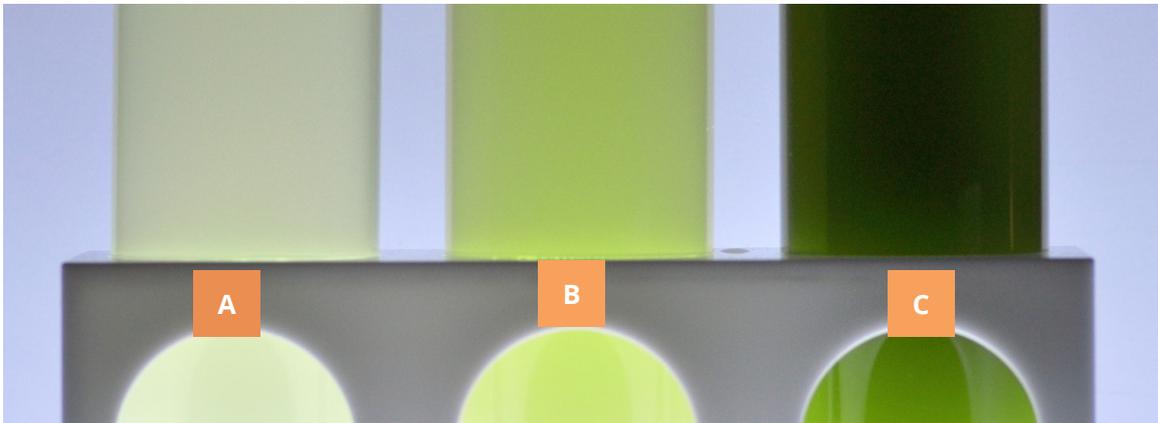
The dosage data detailed below are under ideal conditions, assuming a rotifer density of 600 rotifers/ml.

Initial dosage = **1ml every 4 hours (6 ml/day)**

▶ **Just before the next feed dosage takes places, the water should have a similar look and colour as the one shown in the picture:**



Sometimes the amount of algae may not match the demand of rotifer.



In the event that the microalgae are exhausted (the water becomes very clear), will indicate that the dosage has not been sufficient **(A)**. Adjustment dosage: **1 ml every 3 hours (8 ml/day)**.



When the rotifer runs out of food for more than 4 hours the number of eggs decreases, as well as the population growth rate. It is crucial that the rotifer always have food available **(B)**.



If the microalgae are not exhausted, the water becomes opaque and green **(C)**. The colour will indicate that the dosage has been excessive and the algae has not been fully consumed. This is usually due to insufficient initial rotifer concentration or low fertility caused by poor physical-chemical conditions of the culture water.

✓ DOSAGE AND ADJUSTMENTS

We will proceed to harvest 500 ml of the culture, filter it, reintroduce the new rotifer in the culture cylinder and complete the volume with adjusted seawater. This action aims to improve water quality, maintaining the concentration of rotifers/ml. **Adjustment dosage = 1 ml every 4 hours (6 ml/day).**

With experience, the intensity of the green color will indicate the amount of algae you need.

- ▶ **Rotifer is very sensitive to changes in the physical-chemical parameters of water. If water quality deteriorates rapidly, the rotifer population will be affected. If excessive dirt is seen on the cylinder, filter the rotifer and inoculate it into a clean cylinder and the necessary algae.**



In case you need technical assistance related to rotifer culture using our Easyractor 4L and Easyroti, please contact us via email at info@easyreefs.com



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