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NEW DEVELOPMENTS IN THE MASS CULTURE AND NUTRITIONAL ENRICHMENT OF THE ROTIFER **Brachionus plicatilis** USING ARTIFICIAL DIETS

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Intensive larviculture of marine fish still heavily relies on the availability of nutritionally adequate rotifers. Although the culture of rotifers is relatively simple, achieving predictable culture output is not always evident. A main problem in intensive rotifer production is that of food. In most cases cultured algae are fed in combination with fresh baker's yeast. The production of algae is cumbersome and expensive, and fresh baker's yeast cannot be stored for more than a few days without affecting culture performance. Moreover, the nutritional composition of baker's yeast and algae fed rotifers does not meet the essential fatty acid requirements of larval marine fish.
We have carried out a research programme to improve and facilitate rotifer culturing as well as to assure their optimal nutritional quality as a prey. We have concentrated on the development of a dry and complete rotifer diet that does not require the use of algae and does result in a HUFA rich **Brachionus**.
The present poster provides results dealing with culture aspects and rotifer nutritional quality. Different diet compositions based on single cell proteins enriched with various nutritional additives have been evaluated. Culture tests were carried out in small (800 ml) and large (100 - 1000 l) containers. Two different batch culture procedures were applied: maintenance of a constant culture volume with an increasing rotifer density, as well as maintenance of a constant rotifer density by increasing the culture volume. The cultures were set-up in chlorinated and diluted seawater (25 ppt S) and continued during a period of 4 to 6 days.
Results obtained sofar demonstrate that a selected formula of a combined culture and enrichment diet, that does not involve the use of microalgae at all, can be successfully used for growing and enriching rotifers.

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