Effects of L-Carnitine on Growth of Individually Cultured Cladoceran, *Moina micrura*

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(Received 30.7.10, Accepted 22.9.10)

Key words: *Moina micrura*, L-carnitine, population growth

**Abstract**

The cladoceran, *Moina micrura*, is a potential alternative live food for fish larvae. The effects of L-carnitine enrichment on first reproduction age, population density, and growth rate in *M. micrura* were determined. The cladocerans were enriched at 10 levels of L-carnitine (0, 0.001, 0.01, 0.1, 1, 10, 100, 500, 1000, and 1500 mg/l) dissolved in 30 ml *Chlorella vulgaris* culture medium for 17 days. The first reproduction age was stimulated by the supplemental L-carnitine. The population density was highest in the 1 mg/l treatment. The highest population growth rate was obtained in the 10 mg/l treatment, but it did not differ from the growth rate in the 0.1, 1, or 100 mg/l treatments. Consequently, the optimum L-carnitine concentration for *M. micrura* is 1 mg/l. Results suggest that L-carnitine can be a positive factor in enhancing the use of *M. micrura* as an alternative live food for fish larvae.

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