

Introducing standard protocol for enrichment of *Artemia franciscana* nauplii with Canola oil

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Abstract

In this study, the effects of enriching *Artemia franciscana* nauplii with three concentrations of Canola oil at three density levels were evaluated on survival, total length and fatty acids of *Artemia franciscana* nauplii to determine the optimum concentration oil, density of nauplii and optimum time for maximum survival rate and fatty acids and minimum total length of nauplii. Cysts of *Artemia franciscana* were hatched according to the standard method (Sorgeloos, 1986). *Artemia franciscana* nauplii were then stocked at densities of 50000, 100000 and 200000 nauplii L⁻¹ in 7 L cylindrical containers. Canola oil emulsion was added at concentrations of 0.1, 0.2 and 0.3 g L⁻¹ at the beginning and 12 hours after the onset of enrichment. Nauplii were sampled at 6, 12 and 18 h after onset of enrichment for measuring the survival, total length and the concentration of fatty acid. The results of analysis showed that enrichment of *Artemia* with 0.3 g L⁻¹ Canola oil at 50000 nauplii L⁻¹ for 18 hours was considered as best treatment. *Artemia* nauplii enriched in this treatment had maximum linoleic and linoleic acids, highest survival and minimum total length.

Keywords: *Artemia franciscana*, enrichment, Canola oil, fatty acids.