



The Effect of freezing on hatching efficiency, growth and survival of *Artemia urmiana* after hydration and dehydration

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Abstract

The aim of this study was the freezing effects at -20°C after hydration and subsequent dehydration on the hatching efficiency, survival percentage and growth of *Artemia urmiana* larvae. Experiment contained four treatments. At first treatment, hatching was obtained after one hydration and dehydration cycle with the standard method. In the second treatment, hatching was done after hydration and dehydration cycle and kept frozen in -20°C for a week. In third treatment, the freezing period was extended up to one month. The control was carried out along standard hatching procedure (fourth treatment). Results indicated the cyst hatching percentage increased by increasing freezing time (one-month freezing), even though hatching percentage was higher in control group. The most survival percentage was observed in the 11th day of third treatment. The highest growth was observed from larvae hatched in 15 to the 25th day of third treatment ($P<0.05$). In conclusion, the freezing was not necessary to improve the hatching rate and larval growth.

Key words: *Artemia urmiana*, Cyst, Dehydration, Hydration, Freezing.

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