Effect of salinity on density and population growth of parthenogenetic *Artemia* under laboratory conditions

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Abstract

Effect of salinity levels on density and population growth of parthenogenetic *Artemia* were studied. Cysts were hatched and 200 nauplii were transferred into cylindro-conical containers (1.5 liter) containing one-liter water at different salinities (50, 100, 150, 200 and 250 ppt) and cultured until maturity. After maturity, 3 female parthenogenetic *Artemia* were selected randomly from each of the five levels of salinity and cultured in 4 replicates for 12 weeks. The growing *Artemia* were categorized into four population groups (1) nauplii and meta-nauplii, (2) juvenile *Artemia* (3) pre-adult *Artemia*, and (4) adult *Artemia* and were counted once a week. Results showed that the density of adults, nauplii and meta-nauplii were higher in 100 ppt. The maximum population of pre-adult and juvenile *Artemia* were found at 50 ppt. The density of adult Artemia increased while density of other categories decreased during culture period. Based on our findings, an inverse relationship between salinity and population of parthenogenetic *Artemia* were observed. Results indicated that lower salinities are more suitable for population growth of parthenogenetic *Artemia*.

Keywords: Parthenogenetic *Artemia*, Population growth, Laboratory condition, Salinity

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