Salinity is an important factor influencing growth and survival of aquatic organisms such as Artemia, a valuable aquaculture species. This study evaluated the effects of salinity on A. franciscana populations from different water bodies in Mexico's Pacific Coast. With this purpose, five autochthonous bisexual Artemia populations were tested to assess their survival and growth values against salinities of 40, 60, 80, 100 and 120g/l, under laboratory conditions (25±2ºC; pH 8-10; constant light and aeration). The organisms were fed with 100mL of rice bran and 2L of Tetraselmis suecica (500 000cel/ml). The culture experiments were made in 200L plastic tanks, and survival and growth final values were obtained after 21 culture days. Survival and growth curves were determined by a regression analysis (R²). The significant differences between salinities were determined by ANOVA test (p<0.05). The best survival and growth rates were found at salinities of 100-120g/l. When the Mexican Artemia populations were cultivated at 40g/l of salinity, 100% mortality was observed in the juvenile stage. This study determined that survival and growth values of A. franciscana populations increased with salinity. The five A. franciscana populations presented significant differences in their survival rate under various salinity regimes. The studied populations experienced high mortality at salinities under 60g/l and over 200g/l, and especially during the metanauplius stage. The present study confirms that growth rates in Mexican A. franciscana populations from Pacific Coast habitats are not inversely proportional to salinity. These A. franciscana populations should be cultured at 100-120g/l of salinity to obtain better survival and growth rates. This data is useful to improve culture systems in aquaculture biomass production systems.

Keywords
Artemia franciscana, salinity, growth, survival, Mexico, Pacific Coast.