

doi: 10.21307/ACEE-2018-047

DEVELOPMENT OF *DAPHNIA MAGNA* UNDER EXPOSURE TO AMPICILLINThi-My-Chi VO ^a, Ngoc-Han PHAM ^b, Tan-Duc NGUYEN ^c, Manh-Ha BUI ^{d*}, Thanh-Son DAO ^e^a MSc; Institute of Research and Development, Duy Tan University, Da Nang City 550000, Vietnam^b MSc; Institute for Environment and Resources, 142 To Hien Thanh Street, District 10, Ho Chi Minh City 700000, Vietnam^c MSc; Department of Advanced Engineering, Graduate School of Engineering, Nagasaki University, 1-14 Bunkyo-machi Nagasaki City 8528521, Japan^d PhD; Department of Environmental Sciences, Saigon University, 273 An Duong Vuong Street, District 5, Ho Chi Minh City 700000, Vietnam.*E-mail address: manhhakg@sgu.edu.vn^e Associate Prof.; Ho Chi Minh City University of Technology, 268 Ly Thuong Kiet Street, District 10, Ho Chi Minh City 700000, Vietnam

Received: 30.04.18; Revised: 17.05.18; Accepted: 24.05.18

Abstract

In this study, the chronic effects of Ampicillin on survival, reproduction and growth of *Daphnia magna* was monitored during 21 days exposure test. The results showed that Ampicillin strongly affected on life history traits of *Daphnia magna*, i.e. 47% reduction of survival proportion, lower 68% reproduction than the control, and reduction in body length and in the intrinsic population rate, especially at its highest concentration. The antibiotics especially Ampicillin should be included in the Vietnam guidelines for environmental and ecological protection.

Keywords: Ampicillin; Antibiotic; Chronic effects; *Daphnia magna*; Life history traits.