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## **Aqueous medium toxicity assessment by *Daphnia magna* swimming activity change**

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### **Abstract**

© 2014 AENSI Publisher All rights reserved. This paper presents toxicity evaluation data for the water containing various substances of known concentrations of various substances by *Daphnia magna* swimming activity change. The toxicity of the following substances was evaluated: potassium dichromate, zinc sulphate, pesticide esfenvalerate and cyanobacterial toxin of microcystin-LR. The swimming activity was determined using a computer vision system under normal conditions and after the toxicant introduction. It has been shown that at exposure time of 30 minutes, the median swimming speed of *Daphnia* changes. This fact may be used for the rapid assessment of aquatic toxicity, as well as for the development of the biological early warning systems for the contamination presence.

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### **Keywords**

Computer vision, *Daphnia magna*, Swimming activity, Toxicity assessment