Ahmad Zainuddin. 2015, Efek Salinitas dan Timbal Terhadap Osmoregulasi dan Hematologi Ikan Nila (*Oreochromis niloticus*)
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ABSTRAK

Penelitian ini bertujuan untuk mengetahui efek salinitas dan timbal terhadap kapasitas osmoregulasi dan hematologi ikan nila (*Oreochromis niloticus*). Terdapat empat tahap pada penelitian ini yaitu tahap persiapan penelitian, pelaksanaan penelitian, pengujian hasil penelitian, dan pengolahan hasil penelitian. Hasil penelitian menunjukkan kapasitas osmoregulasi dengan timbal 0 mg/L, 100 mg/L, dan 150 mg/L pada salinitas 0 $^{0}/_{00}$ dan 5 $^{0}/_{00}$ hiperosmotik sedangkan 10 $^{0}/_{00}$, dan 15 $^{0}/_{00}$ hipoosmotik. Kadar hemoglobin pada salinitas 0 $^{0}/_{00}$, 5 $^{0}/_{00}$, 10 $^{0}/_{00}$ dengan timbal 100 mg/L dan pada salinitas 0 $^{0}/_{00}$, 5 $^{0}/_{00}$, 10 $^{0}/_{00}$, dan 15 $^{0}/_{00}$ dengan timbal 150 mg/L berada dibawah batas normal. Pada perlakuan 0 $^{0}/_{00}$ dan 5 $^{0}/_{00}$ dengan timbal 100 mg/L serta pada salinitas 0 $^{0}/_{00}$, 5 $^{0}/_{00}$, 10 $^{0}/_{00}$ dengan timbal 150 mg/L jumlah eritrosit berada dibawah batas normal. Kadar hematokrit mengalami penurunan dibawah batas normal pada perlakuan yang sama dengan perlakuan yang menyebabkan jumlah eritrosit menurun dibawah batas normal. Jumlah leukosit meningkat pada setiap pelakuan dibandingkan jumlah leukosit pada kontrol, hanya pada salinitas 15 $^{0}/_{00}$ dengan kadar timbal 100 mg/L jumlah leukosit berada dibawah kontrol, namun peningkatan dan penurunan jumlah leukosit masih berada pada kisaran normal. Hasil uji uji toksisitas pada penelitian ini menjukkan nilai sebesar 186,61 mg/L.

Kata kunci: Osmoregulasi, hematologi, *Oreochromis niloticus*, salinitas, timbal.

Ahmad Zainuddin. 2015, Effects of Salinity and Lead in Osmoregulation and Hematology *Oreochromis niloticus.*
This thesis was guided by Prof. Dr. Ir. Agoes Soegianto, DEA. and Prof. Bambang Irawan, M.Sc, Department of Biology, Faculty of Science and Technology, Airlangga University, Surabaya

ABSTRACT

The purpose of this research was determined the effects of salinity and lead to osmoregulation capacity and hematologic of *Oreochromis niloticus*. There were four stages in this research included the preparation of research, implementation research, testing research, and processing the results. The results showed that the capacity of osmoregulation with lead 0 mg/L, 100 mg/L, and 150 mg/L in salinity 0 $^{0}/_{00}$ and 5 $^{0}/_{00}$ was hyperosmotic, while in salinity 10 $^{0}/_{00}$ and 15 $^{0}/_{00}$ was hypoosmotic. Hemoglobin levels in salinity 0 $^{0}/_{00}$, 5 $^{0}/_{00}$, 10 $^{0}/_{00}$ with a lead of 100 mg/L and in salinity 0 $^{0}/_{00}$, 5 $^{0}/_{00}$, 10 $^{0}/_{00}$, 15 $^{0}/_{00}$ with lead 150 mg/L was under normal limit. Exposure in salinity 0 $^{0}/_{00}$ and 5 $^{0}/_{00}$ with lead 100 mg/L and in salinity 0 $^{0}/_{00}$, 5 $^{0}/_{00}$, 10 $^{0}/_{00}$ with a lead of 150 mg/L showed that the number of erythrocytes was under normal limit. Hematocrit levels decreased under normal range in the same treatment with the treatment that causes the red cell count falls under normal limits. The number of leukocytes increased in each treatment compared to the number of leukocytes of control sample, only in salinity 15 $^{0}/_{00}$ with lead level of 100 mg/L leukocyte count was under the number of leukocytes of control sample, but the increment and decrement in the number of leukocytes was still in the normal range. The result of toxicity test in this research is 186.61 mg/L.

Keywords: Osmoregulation, hematology, *Oreochromis niloticus,* salinity, lead