



P-18

Bioassay of an N-Nitrate pollutant on the survival of aquatic developmental stages of Endemic common tree frog, *Polypedates cruciger* (Rhacophoridae) under the laboratory conditions

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Nitrate products release into the natural environment, mainly due to the agricultural application of nitrogen based fertilizers. These products pollute the environment causing stresses to many aquatic organisms, including the larval stages of amphibians. A short term experiment was conducted to assess the effects of Potassium nitrate (N-Nitrate) on survival of larvae of the endemic common hourglass shaped tree frog *Polypedates cruciger* under the laboratory conditions. A total of 120 early gill stage tadpoles were tested in 3 predetermined concentrations of 290, 350, 470, mg/l Potassium nitrate. 120 external gill stage (3 day old) tadpoles and 120 internal gill stage tadpoles (10 day old) were tested in 3 predetermined concentrations of 325, 375, 475 mg/l and 360, 410, 520 mg/l Potassium nitrate respectively. Experiment was conducted for 2 days, all experimental tanks renewed daily and every concentration sets were replicated in 3 times with controls. Toxicological studies revealed that early life stages or external gill stages of *P. cruciger* are more susceptible to the N-nitrate than those of the late stage or internal gill stage. The mean mortality rate became progressively higher as duration of exposure increased.

Keywords - *Polypedates cruciger*, N-Nitrate, external gill stage, internal gill stage