

Exposure copper heavy metal (cu) on freshwater mussel (anodonta woodiana) and its relation to cu and protein content in the body shell

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Abstrak

Kurnia AI, Purwanto E, Mahajoeno E. 2010. Exposure copper heavy metal (Cu) on freshwater mussel (Anodonta woodiana) and its relation to Cu and protein content in the body shell. Nusantara Bioscience 2: 48-53. To determine the relationship of Cu exposure in water to the freshwater mussel exposure experiment is conducted with water containing Cu. Which measured the influence of Cu and protein content in the body shell. This study used the freshwater mussel species, Anodonta woodiana. Oysters were exposed for four weeks in the water with Cu concentration of 0.02 ppm, 0.04 ppm, 0.06 ppm and 0.00 ppm control. Cu content and protein content in the body shells are checked every week. Cu analysis was done by AAS method and the protein content using Kjeldahl method. Cu analysis showed elevated levels of Cu in mussel body after exposure. The pattern of increase in Cu content was not the same, where the pattern of the largest increases occurred after the fourth week. The statistical test showed no significant effect between the treatment with Cu accumulation in the body shell. Protein analysis showed an increase of protein content after exposure of the second week and decreased after the third and fourth weeks. The pattern of changes in protein content varied among the various treatments. The statistical test showed no significant effect between treatment with the protein changes in the body shell. Correlation test of the relationship between concentration of Cu in mussel body protein level showed a positive correlation between them with a fairly good level of relationship (correlation coefficient $r = 0.836$).