Toxicity of Personal Care Products with Varying Preservatives on *Glycera dibranchiata*

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Abstract

Formaldehyde is a chemical compound that is used industrially and commercially. It is a known human carcinogen. Despite this, formaldehyde releasing compounds are used as preservatives in many cosmetics and personal care products. This experiment will compare the toxicity of a personal care product containing dimethyloldimethyl hydantoin, a formaldehyde releasing compound, and a personal care product containing benzyl alcohol. This toxicity test will be conducted on *Glycera dibranchiata* (bloodworms). The test consisted of bloodworms being exposed to different concentrations of each solution. Then the bloodworms were observed for lethal and sublethal effects after 24 hours and 96 hours of exposure. In addition, the heart rate of the bloodworms were observed at the concentration which had the most sublethal effects. It is important to study bloodworms and their reaction to varying chemical compounds in personal care products since these products are disposed of into waste water after use and the chemicals usually are not taken out of the water at treatment plants. Therefore, these chemicals are released into ecosystems and can have detrimental effects on the environment.