

## Heavy Metal Content of Cadmium (Cd) and Chromium (Cr) in Green Mussels (*Perna viridis*) and Sediments of Sawojajar Waters, Brebes

<b>Title</b>	Heavy Metal Content of Cadmium (Cd) and Chromium (Cr) in Green Mussels ( <i>Perna viridis</i> ) and Sediments of Sawojajar Waters, Brebes
<b>Author Order</b>	4 of 4
<b>Accreditation</b>	
<b>Abstract</b>	<p>Green mussel (<i>Perna viridis</i>) is one of the spesies in Bivalve class which filter the food particles from their surroundings. As filter feeder, it captured anything including plankton, detritus, and even heavy metals. Heavy metals content in green mussels could become dangerous due to the bioaccumulation process. This research aimed to determine the levels of heavy metals Cadmium (Cd) and Chromium (Cr) not only in the tissues of green mussels but also in the sediments of Sawojajar waters, Brebes; current study also determined the feasibility of green mussels for consumption in the perspective of food safety. The method used in this research was a field survey method which conducted in June 2022. The analysis method used AAS refers to the American Public Health Association (APHA) with laboratory tests conducted at the Productivity and Aquatic Environment Laboratory of IPB. The results showed that the content of heavy metal Cd in green mussel samples was at 0.19 mg.kg-1 which was meet the threshold concentration. Whereas, the heavy metal Cr in green mussels tissue exceeded the threshold of chromium concentration at 0.21 mg.kg-1. In addition, the heavy metal content of Cd and Cr in sediment were still meet the threshold concentration at 3.2 mg.kg-1 and 0.13 mg.kg-1 respectively. In terms of food safety, the EDI (Estiate Daily Intake) value based on the results of heavy metals Cd and Cr concentrations was 0.11 and 0.13 <math>\mu\text{g.kg}^{-1}\cdot\text{day}^{-1}</math> respectively. The result indicated that these heavy metals concentration had low risk in causing health issue. In the same way, the target hazard value (THQ) of Cd and Cr were not exceeded the RfD (Reference Dose) at 0.109 and 0.036 respectively. These value of THQ for both Cd and Cr indicated low risk in causing cancer and the green mussels are meet the food safety standard</p>
<b>Publisher Name</b>	Fakultas Perikanan dan Ilmu Kelautan
<b>Publish Date</b>	2023-06-15
<b>Publish Year</b>	2023
<b>Doi</b>	DOI: 10.20884/1.maiyah.2023.2.2.8770
<b>Citation</b>	
<b>Source</b>	MAIYAH
<b>Source Issue</b>	Vol 2 No 2 (2023): Maiyah : Vol.2 No.2 Juni 2023
<b>Source Page</b>	68-74
<b>Url</b>	<a href="https://jos.unsoed.ac.id/index.php/maiyah/article/view/8770/4033">https://jos.unsoed.ac.id/index.php/maiyah/article/view/8770/4033</a>
<b>Author</b>	Dr NUNING VITA HIDAYATI, M.Si