

ASSESSMENT OF CADMIUM DAN LEAD IN SALTWATER  
FISH, *EPINEPHELUS SEXFASCIATUS*  
(SIXBAR GROUPER) FROM MARKETS IN  
KLANG VALLEY

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## ABSTRACT

This research was carried out to determine the concentration of lead and cadmium present in the organs namely brain, gills, liver, kidney, intestine and muscle of *Epinephelus sexfasciatus*. The concentration of cadmium and lead in the organs were compared based on the sample locations which are wet market and supermarket. In this study, concentration of cadmium and lead were determined using the atomic absorption spectrometer instrument after samples were digested with acetic acid. Results that were obtained from the instrument were compared with a few food regulatory standards Food and Agricultural Organization (1983), Malaysian Food Regulation (1985) and World Health Organization (1996). Estimated weekly intake of dietary cadmium and lead were determined and compared with the tolerable weekly intake to prevent health effects in humans from hazardous metal. The highest concentration of cadmium and lead were detected in the organ kidney and brain from wet market where else the muscle have lowest concentration of cadmium and lead. Cadmium and lead may reach to the fish muscles and organs in many different routes especially through contaminated water. All of the organs that were detected with cadmium and lead did not exceed the permissible limits by food regulatory standards. The estimated weekly intake of cadmium and lead were below the tolerable weekly intake when PTWI of cadmium and lead were compared. High levels of cadmium and lead in the fish muscle are hazardous to the human health and preventative measures is necessary due to fish muscle is one of the most common food consumed by humans.

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