

ASSESSMENT OF HEAVY METALS (CADMIUM AND LEAD)
IN GROUPEP (*Epinephelus spp.*) BY USING
ATOMIC ABSORPTION SPECTROMETER

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ABSTRACT

This study is carried out to determine whether the groupers sold in markets around Klang Valley are safe to be consumed. The commonly edible fish (grouper) were collected from hypermarkets and wet markets around Klang Valley in Malaysia. The groupers purchased were mainly come from Pork Klang, Kuala Selangor, Pulau Ketam and Kuala Langat. After that, cadmium and lead concentrations of the muscle tissues of the fish samples were determined by using Atomic Absorption Spectrometer. Results from AAS showed that metal concentrations were ranging from 0.0357 mg/kg to 0.2141 mg/kg for cadmium and from 0.3378 mg/kg to 1.8581 mg/kg for lead in the fish samples. The levels of lead were slightly higher than the levels of cadmium in tested groupers. There is no significant difference between the metal content in the groupers from hypermarket and wet markets. The tested heavy metal levels did not exceed the standard limit set by Food Regulation 1985 in Malaysia but some fish samples had exceeded the maximum levels set by Commission Regulation and Codex Committee on Food Additives and Contaminants (CCFAC). The estimated daily intake of grouper for Malaysia was lower than the guideline values set by U. S. Environmental Protection Agency (EPA) and Joint FAO/WHO of Expert Committee on Food Additive (JECFA). This study has indicated that the heavy metals in groupers from Klang Valley are at acceptable level according to Malaysian Standard.

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