

UNIVERSITI TEKNOLOGI MARA

**LEAD AND CADMIUM CONCENTRATION IN BUDU
AND ITS POTENTIAL HEALTH RISK**

MUHAMAD FARIS AKRAM BIN MUHAMAD LUDIN

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Declaration by Student

Project entitled “Lead and Cadmium Concentration In Budu And Its Potential Health Risk” is a presentation of my original research work. Wherever contributions of others are involved, every effort is made to indicate this clearly, with due reference to the literature, and acknowledgement of collaborative research and discussions. The project was done under the guidance of my project supervisor, Tuan Haji Hashim Bin Ahmad. It has been submitted to the Faculty of Health Sciences in partial fulfilment of the requirement for the Degree of Bachelor in Environmental Health and Safety (Hons).

Student's Signature:



.....
(Muhamad Faris Akram Bin Muhamad Ludin)

2011223868

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ABSTRACT

Lead and Cadmium Concentration in Budu and Its Potential Health Risk

Muhamad Faris Akram Bin Muhamad Ludin

Budu is a fish sauce made from anchovies which is famous and regularly consumed by the Malaysian especially in Kelantan. However, there is issue on heavy metal contamination in marine, since the budu is also made from fish, there is concern to check the heavy metal level in the budu. The study was conducted in Kelantan where thirty (30) budu samples are randomly selected from six (6) batches of five (5) different brands and being analysed using Atomic Absorption Spectrophotometer (AAS) by acid digestion method. Questionnaires are also randomly distributed to 100 respondents during this study. The result show the lead concentration in all budu brands are exceeding the maximum permitted proportion under Food Act 1983 and Food Regulation 1985 while for cadmium concentration, all brands were below the level. There was significance difference of mean of both cadmium and lead concentration between all budu brands. There are no potential health risks associated with budu dietary consumption for both lead and cadmium except when the budu is consumed twice per day, the hazard index for lead is higher than one for brand A which mean there is potential health effect. As conclusion, the budu has been contaminated with high lead concentration and can cause health effect to consumer if eating frequency per day of the budu is increase. It is suggested that consistent monitoring should be done to monitor the level of heavy metal in budu.

Keyword: Lead, Cadmium, AAS, Budu.