

**DETERMINATION OF HEAVY METALS  
CONCENTRATION IN DRY ANCHOVIES**

**Z Aidatul Norakmar Binti Mohd Ridah**

**BACHELOR OF SCIENCE (Hons.) CHEMISTRY  
FACULTY OF APPLIED SCIENCES  
UNIVERSITI TEKNOLOGI MARA**

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## ABSTRACT

### DETERMINATION OF HEAVY METALS CONCENTRATION IN DRY ANCHOVIES

This study aimed to determine the concentration of essential heavy metals (zinc, copper) and non-essential heavy metals (cadmium, lead) in four different types of dried anchovies that were obtained from retail shops. All samples were classified as Type A (big, peel), Type B (big, unpeel), Type C (small, unpeel), and Type D (small, peel). Heavy metals were analysed using Flame Atomic Absorption Spectrophotometer (FAAS). Concentration of zinc was the highest in all samples which is 0.93 mg/kg. Lead shows the lowest concentration which is below the detection limit of FAAS. Meanwhile, concentration of copper and cadmium were 0.047 mg/kg and 0.043 mg/kg, respectively. All of heavy metals in samples were below the permissible limits that had been listed by Malaysian Food Regulation (1985). Hazard index (HI) for Type A, Type B, Type C and Type D were  $2.31 \times 10^{-5}$ ,  $2.57 \times 10^{-5}$ ,  $2.22 \times 10^{-5}$  and  $2.48 \times 10^{-5}$ , respectively. All samples are safe to consume and there is no potential non-carcinogenic risk since the HI values were below unity.

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