

## ABSTRAK

### **KAJIAN KANDUNGAN LOGAM BERAT TIMBAL (Pb), KADMIUM (Cd), TEMBAGA (Cu), KROMIUM (Cr) DAN MANGAN (Mn) PADA IKAN KURISI (*Nemipterus japonicus*) DI PERAIRAN TELUK LAMPUNG SECARA SPEKTROFOTOMETRI SERAPAN ATOM**

Oleh

**Apri Welda**

Telah dilakukan kajian kandungan logam berat Pb, Cd, Cu, Cr dan Mn pada ikan kurisi di tiga lokasi pada perairan Teluk Lampung yaitu Lempasing, Rangai dan Kalianda. Penelitian ini dilatarbelakangi oleh tingginya minat masyarakat Lampung dalam mengkonsumsi ikan kurisi hasil tangkapan di perairan Teluk Lampung, sementara belum diketahui apakah ikan kurisi pada perairan tersebut bebas dari pencemaran logam berat berbahaya. Penelitian ini diharapkan dapat memberikan informasi mengenai mutu ikan kurisi tersebut apakah aman dari pencemaran logam berat Pb, Cd, Cu, Cr dan Mn, sehingga layak dijadikan sumber pangan masyarakat secara umum. Penelitian ini menggunakan alat *Spektrofotometri Serapan Atom (SSA)* dalam menentukan nilai konsentrasi logam Pb, Cd, Cu, Cr dan Mn. Preparasi sampel ikan kurisi dilakukan dengan metode destruksi basah menggunakan campuran asam HNO<sub>3</sub> 65% dan H<sub>2</sub>O<sub>2</sub> 30%. Kemudian konsentrasi logam Pb, Cd, Cu, Cr, dan Mn dianalisis dengan alat *Spektrofotometri Serapan Atom (SSA)*. Hasil penelitian menunjukkan bahwa ikan kurisi yang diambil dari perairan Kalianda tercemar logam Cu sebesar 0,0932 ppm dan Mn sebesar 1,0830 ppm, sementara dari perairan Lempasing didapati cemaran logam Mn sebesar 0,2454 ppm. Logam berat lainnya tidak terdeteksi. Berdasarkan standar baku mutu logam berat pada ikan laut yang ditentukan oleh *Badan Standarisasi Nasional (BSN)* dan *Badan Pengawasan Obat dan Makanan (BPOM)*, maka disimpulkan bahwa ikan kurisi di perairan Teluk Lampung aman bagi kesehatan manusia dan layak dikonsumsi sebagai sumber pangan jangka panjang.

**Kata Kunci:** Pb, Cd, Cu, Cr, Mn, kandungan logam berat, ikan kurisi, (*Nemipterus japonicus*), perairan Teluk Lampung, Spektrofotometer Serapan Atom

## ABSTRACT

### STUDY OF HEAVY METAL CONTENT LEAD (Pb), CADMIUM (Cd), CHROMIUM (Cr), COPPER (Cu) AND MANGANESE (Mn) IN JAPANESE THREADFIN BREAM (*Nemipterus japonicus*) AT LAMPUNG BAY WATERS USING ATOMIC ABSORPTION SPECTROPHOTOMETRY

By

**Apri Welda**

The study of heavy metals content (*Pb, Cd, Cu, Cr and Mn*) in Japanese threadfin bream at three locations of Lampung bay waters namely Lempasing, Rangai and Kalianda. This study is motivated by the high interest of Lampung community in consuming Japanese threadfin bream caught at Lampung bay waters, while it is not yet known whether this fish at these waters are free from harmful heavy metals pollution. This study is expected to provide information about the quality of Japanese threadfin bream, whether it is safe from the pollution of heavy metals Pb, Cd, Cu, Cr and Mn, so that it is worthy of being consumed as a food source for the general public. This study uses *Atomic Absorption Spectrophotometer* (AAS) in determining the metal values of Pb, Cd, Cu, Cr, and Mn. Preparation of fish samples was carried out by wet destruction method using 65% HNO<sub>3</sub> and 30% H<sub>2</sub>O<sub>2</sub>. Then the concentrations of Pb, Cd, Cu, Cr, and Mn were analyzed by *Atomic Absorption Spectrophotometry* (AAS). The result showed that Japanese threadfin bream taken from Kalianda waters contaminated with Cu metal was 0,0932 ppm and Mn was 1,0830, while from the Lempasing waters found Mn metal contamination of 0,2454 ppm. Other heavy metals are not detected. Based on the quality standards for heavy metals in marine fish as determined by *The National Standardization Agency* and *The Food and Drug Supervisory Agency* in Indonesia (*namely BSN and BPOM*), it was concluded that Japanese threadfin bream of Lampung bay are safe for human health and suitable for consumption as a long-term food source.

Keywords: Pb, Cd, Cu, Cr, Mn, heavy metal content, japanese threadfin bream, (*Nemipterus japonicus*), Lampung Bay waters, Atomic Absorption Spectrophotometer