

ANALISIS KANDUNGAN MERKURI (HG) DAN SIANIDA (CN) PADA BEBERAPA JENIS IKAN HASIL TANGKAPAN NELAYAN DI TELUK KAO, HALMAHERA UTARA

*Content Analysis of Mercury (Hg) and cyanide (CN) on Some Types of Fish Catch
Fishermen in the Gulf of Kao, North Halmahera*

Silvanus Maxwell Simange¹, Domu Simbolon², Dedi Jusadi²

Abstract

*The disposal of mercury (Hg) and cyanide (CN) in the gold mining activities in North Halmahera Regency Kao Bay can cause habitat damage and contamination or poisoning and death of various types of biota that live around the area, including fish and humans. Therefore the aim of this study is to determine the content of mercury (Hg) and cyanide (CN) in water consumption and some types of fish catches around the Gulf of Kao and the level of appropriateness for consumption. Location of fish sampling conducted near the mouth of the river in the Cape Taolas Kao Bay (station 1) and Tanjung Akesone (station 2). While the analysis of heavy metal content in water and the fish is done at the in laboratory research centers and industrial development Manado and Limnology Laboratory in Bogor Agricultural University Bogor using AAS method. Samples of fish that contain mercury and cyanide in measuring is white shrimp or fish, *Panaeus merguensis* jackfruit seeds or *Upeneus* sp, fish red Snapper or *Lutjanus* sp, and Belanak/*Mugil* sp. Based on laboratory results showed that mercury (Hg) and cyanide (CN) in seawater around the Gulf of Kao is still below the threshold limit (0.0002 ppm Hg, and CN 0.001 ppm). Compared with water quality standards according to category C Kep-20/MENKLH/I/1990. The content of mercury (Hg) in the liver into 4 types of fish was higher (0.13 to 0.51 ppm) compared to the flesh (0.02 to 0.19 ppm). The most high fish liver content of mercury is fish jackfruit seeds (from 0.45 to 0.51). The content of cyanide (CN) in the liver was also higher (6.0 to 18 ppm) than in meat (4,2 to 9,7 ppm). Referring to the standard intake of mercury on the human body that have been established by WHO in Darmono (2008) of 0.5 ppm, the red Snapper fish, Belanak fish, fish and shrimp jackfruit seeds safe for consumption. While the content of cyanide into the body already exceed safe levels. ranging from 1.52 ppm - 4.5 ppm, WHO (2004). Thus, red snapper, mullet, and shrimp are caught in the Cape Taolas and Cape Akesone Taolas Kao Bay is at a critical level (harmful) when consumed.*

Key words: cyanide, fish consumption, Kao Bay, mercury

¹ Lulusan program magister sains Mayor Sistem dan Pemodelan Perikanan Tangkap, Sekolah pascasarjana IPB

² Dosen Departemen Pemanfaatan Sumberdaya Perikanan, Fakultas Perikanan dan Ilmu Kelautan IPB