

ABSTRAK

PENENTUAN LOGAM BERAT TEMBAGA (Cu), BESI (Fe), DAN KROMIUM (Cr) PADA SEDIMEN DAN PLANKTON PESISIR GUNUNG ANAK KRAKATAU SECARA SPEKTROFOTOMETRI SERAPAN ATOM (SSA)

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Telah dilakukan penentuan kandungan logam berat Tembaga (Cu), Besi (Fe), dan Kromium (Cr) pada Sedimen dan Plankton Pesisir Gunung Anak Krakatau Secara Spektrofotometri Serapan Atom (SSA). Penelitian ini dilakukan untuk mengetahui pencemaran logam berat diperairan Pesisir Gunung Anak Krakatau. Sampel diambil dari 2 titik berbeda. Preparasi sampel dilakukan dengan cara destruksi basah dan dianalisis menggunakan Spektrofotometri Serapan Atom. Hasil analisis pada sedimen menunjukkan bahwa kadar logam Cu, Fe, dan Cr pada masing-masing lokasi sebesar ($79,224 \pm 0,134$ ppm; $79,383 \pm 0,063$ ppm), ($152,875 \pm 0,031$ ppm; $152,837 \pm 0,044$ ppm), ($11,85 \pm 0,299$ ppm; $11,87 \pm 0,791$ ppm). Konsentrasi logam Cu dan Fe berada di atas ambang baku mutu dan logam Cr berada di bawah ambang baku mutu yang ditetapkan *National Sediment Quality Survey* USEPA (2004). Hasil Analisis kandungan logam Cu dan Cr pada air berturut-turut 0,061 ppm dan 0,018 ppm berada diatas baku mutu sedangkan logam Fe sebesar 1,187 ppm berada di bawah ambang baku mutu yang sudah ditetapkan oleh Keputusan Kementerian Negara Lingkungan Hidup No. 51 tahun 2004. Hasil analisis kandungan logam Cu dan Cr pada plankton 0,097 ppm dan 0,101 ppm berada diatas baku mutu sedangkan logam Fe sebesar 0,141 ppm berada dibawah baku mutu standar.

Kata kunci: Pesisir Gunung Anak Krakatau, Logam Berat, Sedimen, Air, Plankton

ABSTRACT

DETERMINATION OF HEAVY METALS OF COPPER (Cu), IRON (Fe), AND CHROMIUM (Cr) IN SEDIMENTS AND COASTAL PLANKTON MOUNT OF ANAK KRAKATAU BY ATOMIC ABSORPTION SPECTROPHOTOMETRY (AAS)

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Determination of the content of heavy metals Copper (Cu), Iron (Fe), and Chromium (Cr) in Sediments and Coastal Plankton Mount of Anak Krakatau by Atomic Absorption Spectrophotometry (AAS). This research was conducted to determine heavy metal pollution in the coastal waters of Mount Anak Krakatau. Samples were taken from 2 different points. Sample preparation was carried out by wet destruction and analyzed using Atomic Absorption Spectrophotometry. The results of analysis on the sediments showed that the levels of Cu, Fe, and Cr metals at each location were (79.224 ± 0.134 ppm; 79.383 ± 0.063 ppm), (152.875 ± 0.031 ppm; 152.837 ± 0.044 ppm), (11.85 ± 0.299 ppm; 11.87 ± 0.791 ppm). The concentrations of Cu and Fe are above the quality standards and Cr is below the quality standards set by the USEPA *National Sediment Quality Survey* (2004). The analysis results for the content of Cu and Cr metals in water were 0.061 ppm and 0.018 ppm respectively above the quality standard while Fe metal of 1.187 ppm was below the quality standard threshold stipulated by Decree of the State Ministry of Environment No. 51 of 2004. The results of analysis of the content of Cu and Cr metals in plankton 0.097 ppm and 0.101 ppm were above the quality standard while Fe metal of 0.141 ppm was below the quality standard.

Keywords: Coastal Mount Anak Krakatau, Heavy Metals, Sediments, Water, Plankton