

ABSTRACT

DISTRIBUTION OF HEAVY METAL Cr AND Mn IN SEDIMENT OF PANJANG PORT BY ATOMIC ABSORPTION SPECTROPHOTOMETER (SSA) METHOD

By

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Distribution of heavy metals Cr and Mn in sediment of Panjang port Bandar Lampung was conducted. Sample collected used stratified sampling technique. Metals concentration of Cr and Mn was determined by using spectrophotometer atomic absorption. Validation method was performed by limit of detection, precision, accuracy, and linearity. The result showed that the concentration of Cr ranged from $373,36 \pm 0,22$ ppm to $388,03 \pm 5,15$ ppm, indicating above the quality standards set of the *National Sediment Quality Survey* USEPA (76,00 – 233,27 ppm). Heavy metal concentration of Mn ranged from $287,08 \pm 0,44$ ppm to $290,20 \pm 0,27$ ppm. The result showed that the concentration of Mn have exceeded the quality standard of USEPA (120,77 – 284,77 ppm). Validation of the method on determining the level of Cr and Mn metal in the sediments showed limit of detection for heavy metal Cr and Mn of 3,51 ppm and 0,26 ppm, respectively. The high precision performing the relative standard deviation values (RSD) < 5%, accuracy ranging 94,45 – 107,22 %, respectively. The last correlation coefficient value for Cr and Mn metal of 0,99969 and 0,99867, respectively.

Key words : Chromium, Manganese, Panjang port, Atomic Absorption Spectrophotometer