

## ABSTRACT

**Habibah, NIM 1534008, 2015.** The correlation of lead level in the blood sample of scavenger in Landfill Sukawinatan Palembang with their hemoglobin level. Bachelor Thesis. DIV Medical Analysis, Faculty of Medical Science, Universitas Katolik Musi Charitas Palembang.

**Background:** The lead level containing in the blood of scavenger who works in landfill is potentially higher than the lead level containing in the blood of people who live near the high density of traffics. This study aims to investigate the lead level in the blood of scavenger or the people who live near the waste recycling area/landfill. The obtained lead level is then correlated with the hemoglobin containing in the blood sample.

**Method:** This study is observational research or also well known as non-experimental research, epidemiological research, or survey research. The sample used in this study is the scavenger who work and live near the landfill of Sukawinatan Palembang. The sampling technique is total sampling with 17 samples used during the study. However, only 11 samples have inclusion and exclusion criteria. The study was conducted on May 28, 2019, in Balai Besar Laboratorium Palembang. Before conducting lead and hemoglobin analysis, the verification of instrumentation is done. The lead level is analyzed using Atomic Adsorption Spectrophotometer (AAS) with Graphite Furnace to mineralize the sample and the hemoglobin level is measured using Sysmex KX-21 instrumentation.

**Result:** 4 samples have the lead level below the threshold of the maximum lead level containing in the human blood. However, these 4 samples have a low hemoglobin level. The normality test shows that the obtained data is non-normality. It is also supported by the non-parametric test of Spearman which shows that there is no correlation between the lead level with hemoglobin level in the blood sample with  $\rho = 0,241$  ( $\rho > 0,05$ ).

**Conclusion:** The result shows that the lead level containing in the blood sample of scavengers who work in landfill of Sukawinatan Palembang is still below the maximum normal threshold. The statistical analysis confirmed that there is no correlation between the lead level with the hemoglobin level in the blood sample of scavengers who work in the landfill of Sukawinatan Palembang.

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**Keywords:** Lead, Hemoglobin, Scavenger, Landfill Sukawinatan