

**HUBUNGAN KADAR TIMBAL (Pb) TERHADAP
KADAR HEMOGLOBIN (Hb) PADA
TENAGA SERVIS ELEKTRONIK
(Studi Kasus di Wilayah Sawah besar Kota Semarang)**

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ABSTRAK

Timbal merupakan racun yang dapat mempengaruhi kesehatan manusia dan bersifat akumulatif. Paparan timbal berlebih dapat berasal dari asap hasil pembakaran timbal dengan solder yang dapat merusak sistem pernafasan, saraf dan meracuni darah tenaga servis elektronik. Timbal dapat menghambat enzim yang bekerja pada proses biosintesis heme sehingga menyebabkan proses pembentukan heme menjadi berkurang, dan heme tidak dapat berikatan dengan globin sehingga terjadi penurunan kadar hemoglobin. Penelitian ini bertujuan untuk mengetahui adanya hubungan kadar timbal terhadap kadar hemoglobin pada tenaga servis elektronik. Desain penelitian ini adalah analitik *Cross-sectional* dengan uji korelasi *r-Spearman*. Sampel diambil dari 28 responden tenaga servis elektronik di Wilayah Sawah besar Kota Semarang pada bulan februari 2017. Rerata kadar timbal dalam darah tenaga servis elektronik adalah $64,94 \pm 8,50$ µg/dL, rerata kadar hemoglobin adalah $13,63 \pm 1,48$ g/dL. Uji korelasi antara kadar timbal dengan kadar hemoglobin dihasilkan $p = 0,000$ yang berarti ada hubungan antara kadar timbal dengan kadar hemoglobin. Ada hubungan antara kadar timbal (Pb) dengan kadar hemoglobin (Hb) dalam darah tenaga servis elektronik di Wilayah Sawah besar Kota Semarang.

Kata kunci: *Kadar Timbal, Kadar Hemoglobin, Tenaga Servis Elektronik.*

THE CORRELATION OF LEAD CONTENT (Pb) TOWARDS HEMOGLOBIN CONTENT TO THE ELECTRONIC SERVICES

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ABSTRACT

Lead is a toxine that can affect human health and is acumulative. Exposure to excess lead can come from smoke from lead combustion with solder that can damage the respiratory system, nerves and blood poisoning of electronic service personnel. Lead can obstruct the enxyme that works in the process of heme biosynthesis so that it causes the process of heme formation is reduced, and heme can not bind with the globin so the hemoglobin content decrease. This research aimed to discover the correlation of lead content with hemoglobin content to the electronic services. The design of this research is analytic Cross-sectional with correlation test r-Spearman. Sample was taken from 28 respondent of electronic services in the Sawah Besar region of Semarang city on the February 2017. The average of lead content in the electronic services' blood was $64.94 \pm 8.50 \mu\text{g/dL}$, the average of hemoglobin content was $13.63 \pm 1.48 \text{ g/dL}$. The correlation test between lead content and hemoglobin content with the result of $p=0.000$ which means that there was a correlation between lead content and hemoglobin content. There was a correlation between lead (Pb) content with hemoglobin (Hb) content in the electronic services' blood in the Sawah Besar region of Semarang city.

Keywords: *Lead content, Hemoglobin content, Electroic Services*