

ABSTRAK

Timbal merupakan salah satu polutan utama yang dihasilkan oleh aktivitas pembakaran bahan bakar kendaraan bermotor. Lamanya kontak pengguna jalan dengan udara yang tercemar menyebabkan pengguna jalan termasuk ke dalam kelompok masyarakat berisiko tinggi terhadap paparan timbal, salah satunya tukang becak. Terdapat dua kelompok tukang becak berdasarkan lama bekerja yang terpengaruh dengan lama paparan asap kendaraan yang mengandung timbal. Dua kelompok tersebut diantaranya, kelompok dengan lama bekerja lebih dari 8 jam sehari dan kelompok dengan lama bekerja kurang dari 8 jam sehari. Penelitian ini bertujuan untuk menganalisis perbedaan kadar timbal dalam darah berdasarkan lama kerja tukang becak di Wilayah Surabaya Timur.

Jenis penelitian yang digunakan adalah komparatif analitik dengan rancangan penelitian *cross sectional* pada tukang becak di wilayah Surabaya Timur sebanyak 22 orang. Pengukuran kadar timbal (Pb) dalam darah menggunakan alat Spektrofotometer Serapan Atom (SSA). Analisis data yang digunakan pada penelitian ini adalah uji *Independent Sample T-Test*.

Hasil penelitian menunjukkan rata-rata pada kadar Pb darah responden dengan lama kerja operasional lebih dari 8 jam sehari 51,39 µg/L dan rata-rata kadar Pb darah responden dengan lama kerja operasional kurang dari 8 jam sehari 39,92 µg/L. Sehingga dapat disimpulkan bahwa terdapat perbedaan yang signifikan antara kadar Pb darah tukang becak dengan lama kerja lebih dari 8 jam dan tukang becak dengan lama kerja kurang dari 8 jam sehari.

Kata kunci: *Kadar timbal darah, lama kerja, Spektrofotometri Serapan Atom*

ABSTRACT

Lead is one of the main pollutants which is produced by motor vehicle fuel combustion activities. The prolonged contact of road users with polluted air causes road users to be included in the community group at high risk for lead exposure, one of which is the pedicab driver. There are two groups of pedicab drivers based on the length of work which are affected by the length of exposure to vehicle fumes containing lead. The two groups are the group with working hours of more than 8 hours a day and the group with working hours of less than 8 hours a day. The aim of this study is that to analyze differences in blood lead levels based on the length of work of pedicab drivers in the East Surabaya Region.

Moreover, the type of research used was comparative analysis with a cross sectional research design on pedicab drivers in the East Surabaya area as many as 22 people. Measurement of lead (Pb) levels in the blood used an Atomic Absorption Spectrophotometer (AAS). Meanwhile, analysis of the data used in this study was the Independent Sample T-Test.

The result shows that the average blood lead level of respondents with operational working hours of more than 8 hours a day is 51.39 g/L while the average blood lead level of respondents with operating hours of less than 8 hours a day is 39.92 g/L. Thus, it can be concluded that there is a significant difference between blood Pb levels of pedicab drivers with working hours of more than 8 hours and pedicab drivers with working hours of less than 8 hours a day.

Keywords: *Blood lead levels, duration of work, Atomic Absorption Spectrophotometer*