

ABSTRAK

Kadmium merupakan salah satu zat kimia yang ada didalam kandungan rokok, apabila dikonsumsi oleh manusia dalam jangka waktu lama dan intensitas yang cukup sering dapat merusak organ tubuh manusia seperti ginjal. Penelitian ini bertujuan untuk mengetahui paparan kadmium terhadap nilai kreatinin dan ureum pada perokok lintingan aktif dan pasif di Kota Madiun. Jenis penelitian korelasional dengan rancangan potong lintang (*Cross Sectional*) yang dilakukan di Balai besar Laboratorium Kesehatan Surabaya dan Laboratorium Persada Madiun pada Bulan April 2022 – Juni 2022. Terdapat 30 orang responden yaitu 15 perokok lintingan aktif dan 15 perokok lintingan pasif. Pemeriksaan kadmium menggunakan alat Spektrofotometer Serapan Atom (SSA), sedangkan pemeriksaan kreatinin dan ureum menggunakan metode IFCC (kinetik) dengan alat fotometer. Hasil penelitian menunjukkan rerata kadar kadmium perokok lintingan aktif dan pasif sebesar 1,66 µg/L dan 1,18 µg/L ; rerata nilai kreatinin perokok lintingan aktif dan pasif sebesar 1,7 mg/L dan 0,9 mg/L dan rerata nilai ureum perokok lintingan aktif dan pasif sebesar 39,67 mg/L dan 27,41 mg/L. Kesimpulan tidak terdapat hubungan antara kadar kadmium dengan nilai kreatinin dan ureum pada perokok lintingan aktif dan pasif.

Kata kunci: Kadmium, Kreatinin, Ureum, Perokok lintingan aktif dan pasif

ABSTRACT

Cadmium is one of the chemicals contained in cigarettes. If it is frequently consumed by humans for quite a long time, it probably damages human organs such as the kidneys. This study aims to analyze cadmium exposure to creatinine and urea levels in active and passive hand-rolled cigarette smokers in Madiun. This is a correlational study with a cross-sectional design conducted at the Surabaya Health Laboratory Centre and Madiun Persada Laboratory from April to June 2022. There were 30 respondents, consisting of 15 active hand-rolled cigarette smokers and 15 passive hand-rolled cigarette smokers. The examination of cadmium was carried out by using an Atomic Absorption Spectrophotometry (AAS), whereas the examination of creatinine and urea was done through the IFCC method (kinetic) with a photometer. The result shows that the average levels of cadmium in active and passive hand-rolled cigarette smokers are 1.66 $\mu\text{g/L}$ and 1.18 $\mu\text{g/L}$. Moreover, the average levels of creatinine in active and passive hand-rolled cigarette smokers are 1.7 mg/L and 0.9 mg/L , while the average levels of urea in active and passive hand-rolled cigarette smokers are 39.67 mg/L and 27.41 mg/L . Therefore, it can be concluded that there is no relationship between cadmium exposure and creatinine and urea levels in active and passive hand-rolled cigarette smokers.

Keywords: Active and Passive Hand-Rolled Cigarette Smokers, Cadmium, Creatinine, Urea