

Fakultas Ilmu Kesehatan

Universitas Siliwangi  
Tasikmalaya  
2022

ABSTRAK

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**ANALISIS RISIKO KESEHATAN LINGKUNGAN PAJANAN NITROGEN  
DIOKSIDA (NO<sub>2</sub>) DAN SULFUR DIOKSIDA (SO<sub>2</sub>) PADA PEDAGANG  
KAKI LIMA (PKL)**

**(Studi pada beberapa jalan di Kota Tasikmalaya)**

Nitrogen dioksida (NO<sub>2</sub>) dan Sulfur dioksida (SO<sub>2</sub>) merupakan emisi yang dikeluarkan dari aktivitas pembakaran kendaraan bermotor yang menggunakan bahan bakar minyak berupa bensin dan solar. Kedua bahan tersebut dapat menyebabkan risiko gangguan pernapasan, namun bersifat non-karsinogenik. Pedagang Kaki Lima (PKL) di beberapa jalan di Kota Tasikmalaya merupakan populasi yang memiliki risiko bila mengalami pajanan dari emisi tersebut dalam jangka waktu yang lama. Penelitian ini bertujuan untuk mengetahui risiko pajanan NO<sub>2</sub> dan SO<sub>2</sub> pada PKL di beberapa jalan Kota Tasikmalaya. Penelitian ini merupakan penelitian deskriptif kuantitatif dengan menggunakan pendekatan Analisis Risiko Kesehatan Lingkungan (ARKL), dilakukan selama bulan Agustus 2022 terhadap 124 PKL yang terbagi dalam tiga lokasi. Menunjukkan bahwa konsentrasi NO<sub>2</sub> tertinggi di jalan Siliwangi 0,00288 mg/m<sup>3</sup> dan konsentrasi SO<sub>2</sub> tertinggi di jalan Perintis Kemerdekaan 0,00698 mg/m<sup>3</sup>. Nilai *intake realtime* NO<sub>2</sub> tertinggi di jalan KHZ. Mustofa 0,000137 mg/kg/hari dan nilai *intake* SO<sub>2</sub> tertinggi di jalan Kerintis Kemerdekaan 0,000409 mg/kg/hari. RQ *realtime* NO<sub>2</sub> tertinggi di jalan KHZ. Mustofa 0,007132 dan RQ *lifetime* (30 tahun) tertinggi di jalan Siliwangi. Sementara RQ SO<sub>2</sub> *realtime* dan *lifetime* tertinggi di jalan Perintis Kemerdekaan 0,015730 dan 0,0323. PKL di beberapa jalan Kota Tasikmalaya belum mengalami risiko baik secara *realtime* dan *lifetime* karena RQ ≤ 1. Oleh karena itu, belum memerlukan manajemen risiko dan komunikasi risiko namun pemantauan terhadap kualitas udara dan kesehatan PKL harus tetap dilakukan.

Kata Kunci : Konsentrasi NO<sub>2</sub> dan SO<sub>2</sub>, ARKL, Pedagang Kaki Lima, RQ.

Kepustakaan : 38 (1998-2022)

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2022*

## **ABSTRACT**

**PRASETYO ADI NUGROHO**

***ANALYSIS OF ENVIRONMENTAL HEALTH RISK EXPOSURE OF NITROGEN DIOXIDE (NO<sub>2</sub>) AND SULFUR DIOXIDE (SO<sub>2</sub>) IN STREET VENDORS (SV)***

*(Study on several streets in Tasikmalaya City)*

*Nitrogen dioxide (NO<sub>2</sub>) and Sulfur dioxide (SO<sub>2</sub>) are emissions released from the combustion activities of motorized vehicles that use fuel oil in the form of gasoline and diesel. Both of these ingredients can cause the risk of respiratory problems, but are non-carcinogenic. Street vendors (SV) on several roads in the City of Tasikmalaya are populations that are at risk if they are exposed to these emissions for a long period of time. This study aims to determine the risk of NO<sub>2</sub> and SO<sub>2</sub> exposure to street vendors on several streets in Tasikmalaya City. This research is a quantitative descriptive study using the Environmental Health Risk Analysis (EHRA) approach, conducted during August 2022 on 124 street vendors divided into three locations. It shows that the highest NO<sub>2</sub> concentration is on the Siliwangi road 0.00288 mg/m<sup>3</sup> and the highest SO<sub>2</sub> concentration is on the Perintis Kemerdekaan road 0.00698 mg/m<sup>3</sup>. The highest NO<sub>2</sub> realtime intake value on KHZ Mostofa road was 0.000137 mg/kg/day and the highest value of SO<sub>2</sub> intake was at Perintis Kemerdekaan road 0.000409 mg/kg/day. Highest NO<sub>2</sub> realtime RQ on KHZ Mustofa road 0.007132 and the highest RQ lifetime (30 years) on Siliwangi road. Meanwhile, the highest realtime and lifetime SO<sub>2</sub> RQ on the Perintis Kemerdekaan road were 0.015730 and 0.0323. Street vendors on several streets of Tasikmalaya City have not experienced risks both in realtime and lifetime because RQ ≤ 1. Therefore, there is no need for risk management and risk communication, but monitoring of air quality and the health of street vendors must still be carried out.*

*Keywords: NO<sub>2</sub> and SO<sub>2</sub> concentrations, ARKL, Street Vendors, RQ.*

*Literature : 38 (1998-2022)*