



UNIVERSITAS ANDALAS

**ANALISIS RISIKO KESEHATAN LINGKUNGAN PAJANAN GAS
NITROGEN DIOKSIDA (NO₂) PADA PEDAGANG
DI TERMINAL SIMPANG AUR KUNING
KOTA BUKITTINGGI TAHUN 2020**

Oleh :

AHMAD FADHIL AMRULLAH

No. BP. 1611211036

Pembimbing I : Septia Pristi Rahmah, SKM., MKM

Pembimbing II : Fea Firdani, SKM., MKM

FAKULTAS KESEHATAN MASYARAKAT

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KUNING KOTA BUKITTINGGI TAHUN 2020.**

xiii + 82 Halaman, 15 Tabel, 5 Gambar, 11 Lampiran

ABSTRAK

Tujuan Penelitian

Terminal Tipe-A Simpang Aur Kuning sangat padat akan transportasi yang berpotensi menyumbang Nitrogen Dioksida (NO₂) pada 115 pedagang yang berjualan di terminal sehingga bisa berdampak terhadap gangguan pernafasan. Tujuan penelitian adalah menganalisis tingkat risiko pajanan NO₂ pada pedagang di Terminal Simpang Aur Kuning Bukittinggi tahun 2020.

Metode

Penelitian ini menggunakan metode Analisis Risiko Kesehatan Lingkungan (ARKL). Penelitian dilakukan pada bulan Januari-September 2020. Subjek Penelitian ini adalah pedagang yang berjualan di Terminal Simpang Aur Kuning. Pengambilan sampel menggunakan *accidental sampling* sebanyak 60 responden. Objek Penelitian adalah sampel udara ambien di empat titik menggunakan alat *impinger*

Hasil

Konsentrasi rata-rata NO₂ di Terminal Simpang Aur Kuning adalah 0.1667575 mg/m³. Waktu pajanan rata-rata pedagang adalah 10,28 jam/hari. Berat badan rata-rata pedagang 59,02 Kg. Frekuensi pajanan pedagang dengan nilai *median* 358 hari/tahun. Durasi pajanan dengan nilai *median* 6,5 tahun. Nilai *intake realtime* rata-rata 0.0051232 mg/kg-hari. Sedangkan nilai *intake lifetime* rata-rata sebesar 0.0236454 mg/kg-hari. Tingkat risiko *lifetime* yang didapatkan adalah RQ > 1. Keluhan kesehatan yang dirasakan responden ialah batuk (71,7%) sakit kepala (56,7%), iritasi mata (51,7%), pilek (50%), badan panas (43,3%), nyeri tenggorokan (31,7%), sesak nafas (20%), sesak nafas disertai nyeri dada (3,3%), dan asma (1,7%).

Kesimpulan

Konsentrasi NO₂ secara *lifetime* di Terminal Simpang Aur Kuning berpotensi menimbulkan efek merugikan terhadap kesehatan. Diharapkan adanya kajian lebih lanjut dan adanya kerjasama berbagai pihak agar pajanan NO₂ tidak berisiko bagi pedagang untuk jangka waktu 30 tahun.

Daftar Pustaka : 55 (1948-2019)

Kata Kunci : ARKL, NO₂, Pedagang, Terminal Simpang Aur.

**FACULTY OF PUBLIC HEALTH
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AHMAD FADHIL AMRULLAH. No. BP 1611211036

**ENVIRONMENTAL HEALTH RISK ASSESSMENT OF MERCHANTS
EXPOSURE ON NITROGEN DIOXIDE (NO₂) AT SIMPANG AUR KUNING
TERMINAL IN BUKITTINGGI 2020**

xiii + 82 pages, 15 table, 5 figures, 11 appendices

ABSTRACT

Objective

The Simpang Aur Kuning Type-A Terminal is known for its crowded of transportation which can be potentially affect the 115 merchant's respiratory health disorder due to exposure of Nitrogen Dioxide (NO₂). The aim of this study is to analyze the merchant's exposure risk level of NO₂ at Simpang Aur Kuning Terminal in Bukittinggi 2020.

Method

This study used environmental health risk assessment method. The study was conducted from January until September 2020. The subject of this study is merchants around Simpang Aur Kuning terminal. The study was consisted of 60 respondents obtained using accidental sampling technique. The study was used an impinger to assess air ambient at four points on Simpang Aur Kuning terminal.

Results

Average concentration of NO₂ on Simpang Aur Kuning terminal is 0.1667575 mg/m³. Merchant's average exposure time is 10,28 hours/day. Merchant's average weight is 59,02 kg. The frequency of merchant's exposure in median is NO₂ is 358 day/year. The duration of merchant's exposure in median is 6,5 years. The average score of *intake realtime* is 0.0051232 mg/kg-day, whilst the average score of *intake lifetime* is 0.0236454 mg/kg-day. The risk level got from this research is RQ>1. Health complaints be perceived by respondents were cough (71.7%), headache (56.7%), eye irritation (51.7%), runny nose (50%), body fever (43.3%), sore throat (31.7%), shortness of breath (20%), shortness of breath accompanied by chest pain (3.3%), asthma (1.7%).

Conclusion

Lifetime concentration of NO₂ on Simpang Aur Kuning terminal has detrimental impact on health. It is expected that there are further studies to work on this topic and recommend for future cooperation within all parties to solve exposure NO₂ effects on merchant's not risky to 30 years time.

References : 55 (1948-2019)

Keywords : EHRA, NO₂, Merchant, Simpang Aur Kuning Terminal.