

ABSTRAK

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ANALISIS RISIKO PAPARAN GAS SULFUR DIOKSIDA (SO₂) PADA
PEDAGANG TERMINAL PURABAYA

xvii + 82 Halaman + 23 Tabel + 12 Lampiran

Terminal Purabaya merupakan area dengan tingkat kepadatan kendaraan yang tinggi dan berpotensi menjadi sumber pencemaran udara, khususnya dari emisi kendaraan bermotor berbahan bakar fosil seperti solar yang menghasilkan gas sulfur dioksida (SO₂). Paparan gas ini berisiko menimbulkan gangguan kesehatan pada pedagang di sekitar terminal, seperti sesak nafas, mata berair, dan pusing. Penelitian ini bertujuan untuk menganalisis tingkat risiko kesehatan akibat paparan gas SO₂ terhadap pedagang di Terminal Purabaya.

Penelitian ini menggunakan pendekatan Analisis Risiko Kesehatan Lingkungan (ARKL) dengan desain deskriptif kuantitatif dan pendekatan *cross-sectional*. Sampel berjumlah 32 pedagang dipilih menggunakan teknik *purposive sampling*. Pengambilan sampel udara dilakukan pada empat titik lokasi di area terminal dan analisis data dilakukan untuk menilai tingkat paparan dan potensi risiko terhadap kesehatan pedagang.

Hasil penelitian menunjukkan bahwa konsentrasi rata-rata gas SO₂ sebesar 0,018 mg/m³ masih berada di bawah ambang batas yang ditetapkan dalam Permenaker No. 5 tahun 2018. Suhu udara rata-rata tercatat 29,9°C, kelembapan 78,7%, dan kecepatan angin 1,14 m/s dari arah barat. Nilai asupan paparan (*intake*) berkisar antara 0,0007–0,0033 mg/kg/hari, sementara dosis referensi (RfC) adalah 0,026 mg/kg/hari. Perhitungan karakterisasi risiko (RQ) menunjukkan bahwa seluruh responden memiliki nilai $RQ \leq 1$.

Kesimpulan dari penelitian adalah tingkat paparan gas SO₂ terhadap pedagang masih dalam kategori aman dan tidak menimbulkan risiko kesehatan non-karsinogenik. Meski demikian, disarankan agar pedagang tetap menggunakan alat pelindung diri seperti masker dan pengelola terminal melakukan pemantauan kualitas udara secara berkala.

Kata kunci: ARKL, SO₂, pedagang, Terminal Purabaya

Daftar bacaan: 14 buku (2008–2024), 44 jurnal/artikel ilmiah/prosiding (2013–2024), 6 situs website (2019–2024), 7 regulasi/peraturan (2001–2023)

ABSTRACT

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*RISK ANALYSIS OF SULFUR DIOXIDE (SO₂) GAS EXPOSURE TO TRADERS
AT PURABAYA TERMINAL*

xvii + 82 Pages + 23 Tables + 12 Appendices

Purabaya Terminal is an area characterized by high vehicle density and has the potential to be a source of air pollution, particularly from emissions of fossil fuel-powered vehicles such as diesel, which produce sulfur dioxide (SO₂) gas. Exposure to this gas poses health risks to traders in the vicinity of the terminal, including symptoms such as shortness of breath, watery eyes, and dizziness. This study aimed to analyze the health risk levels associated with SO₂ exposure to traders at Purabaya Terminal.

The research employed an Environmental Health Risk Analysis (EHRA) approach with a quantitative descriptive design and a cross-sectional method. A sample of 32 traders was selected using purposive sampling techniques. Air sampling was conducted at four locations within the terminal area and data analysis was performed to assess exposure levels and potential health risks to traders.

The results showed that the average SO₂ concentration was 0,018 mg/m³, which was still below the threshold limit set in the Minister of Manpower Regulation No. 5 of 2018. The average air temperature was recorded at 29,9°C, with humidity at 78,7% and wind speed at 1,14 m/s from the west. The intake exposure values ranged from 0,0007 to 0,0033 mg/kg/day, while the reference dose (RfC) was 0,026 mg/kg/day. Risk characterization calculations (RQ) showed that all respondents had RQ values ≤ 1.

Conclusion of this study is that the level of SO₂ exposure to traders remains within the safe category and does not pose a non-carcinogenic health risk. Nevertheless, it is recommended that traders continue to use personal protective equipment such as masks, and that terminal management conducts regular air quality monitoring.

Keywords: EHRA, SO₂, traders, Purabaya Terminal

References: 14 books (2008-2024), 44 journals/scientific articles/proceedings (2013-2024), 6 websites (2019-2024), 7 regulations/legislation (2001-2023)