

# ANALISIS RISIKO KESEHATAN LINGKUNGAN PAJANAN KARBON MONOKSIDA (CO) PADA PEDAGANG SATE DI JAKARTA PUSAT TAHUN 2022

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## **Abstrak**

Kualitas udara yang buruk dapat berbahaya bagi manusia. Kondisi area yang padat lalu lintas dan aktivitas pengolahan makanan dapat meningkatkan kadar monoksida (CO) sehingga berisiko bagi masyarakat sekitar. Penelitian ini bertujuan menggambarkan risiko akibat paparan CO pada periode waktu mendatang pada pedagang sate di Jakarta Pusat. Desain penelitian yang digunakan adalah desain studi potong lintang dengan Analisis Risiko Kesehatan Lingkungan. Sebanyak 33 pedagang sate dilibatkan sebagai sampel dengan menggunakan teknik total sampling. Pengukuran kadar CO dilakukan di 10 titik menggunakan alat *CO Meter*. Hasil penelitian menunjukkan rerata konsentrasi CO di ruas Jalan Jakarta Pusat mencapai  $58,569 \text{ mg/m}^3$ , rerata berat badan pedagang sebesar 57,3 kg, rerata waktu terpajan sebesar 10,67 jam/hari, rerata durasi pajanan sebesar 2,67 tahun, dan rerata frekuensi pajanan mencapai 343 tahun/hari. Mengenai tingkat risiko *realtime*, didapatkan nilai  $RQ \leq 1$  pada seluruh pedagang sate. Mengenai tingkat risiko *lifetime*, didapatkan nilai  $RQ > 1$  pada 30 pedagang sate, sedangkan sisanya mendapatkan nilai  $RQ \leq 1$  dalam waktu 30 tahun. Disimpulkan risiko kesehatan yang dimiliki oleh pedagang menunjukkan efek *lifetime*. Pedagang disarankan dapat beristirahat 8 jam/hari dan menggunakan alat pelindung diri berupa masker.

**Kata kunci:** pedagang sate, karbon monoksida, analisis risiko

**ENVIRONMENTAL HEALTH RISK ANALYSIS  
OF CARBON MONOXIDE (CO) EXPOSURE  
TOWARDS SATAY VENDORS IN CENTRAL JAKARTA  
2022**

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**Abstract**

Poor air quality can be harmful for humans. The condition of the area with heavy traffic and food grilling activities can increase carbon monoxide (CO) levels that can risk community. The purpose of this study was to determine CO exposure in the future among satay vendors in Central Jakarta. This study used a cross-sectional design study with an Environmental Health Risk Assessment approach. A total of 33 satay vendors were recruited as samples by using a total sampling technique. CO levels were measured by using CO meter at 10 different spots. The results showed that the average CO concentration was 58,569 mg/m<sup>3</sup>, the average vendor's body weight was 57,3 kg, the average time exposure was 10,67 hours/day, the average duration of exposure was 2,67 years, and the average frequency of exposure was 343 years/day. Regarding the real-time risk level,  $RQ \leq 1$  was obtained for all vendors. Regarding the lifetime risk level,  $RQ > 1$  was obtained for 30 vendors, while the rest received  $RQ \leq 1$  within a period of 30 years. It is concluded the health risks owned by vendors show a lifetime effect. Vendors are advised to rest 8 hours/day and use personal protective equipments such as masks.

**Keywords:** satay vendors, carbon monoxide, risk analysis