

INTISARI

Penelitian berjudul 'Kadar CO dan Kadar Pb Di Ruang Parkir Bawah Tanah Pusat Pertokoan Kota Yogyakarta' bertujuan mengetahui hubungan korelasi antara kadar CO dan Pb dengan kepadatan arus kendaraan parkir, hubungan korelasi antara kadar CO dan Pb dengan suhu udara dan kelembaban serta mengetahui seberapa besar pencemaran udara yang terjadi.

Pengukuran terhadap kadar CO dan Pb di ruang parkir bawah tanah pusat pertokoan Mall Malioboro telah dilakukan selama 15 jam mulai pukul 07.00 sampai pukul 22.00 WIB. Kadar CO diukur dengan alat *Electronic Gas Analyzer* dan sampel debu untuk pemeriksaan Pb diambil dengan *Filter holder*. Analisa Pb dilakukan oleh laboratorium Balai Teknik Kesehatan Lingkungan (BTKL) Yogyakarta. Cara analisis data menggunakan uji korelasi dan analisis varian satu jalan.

Hasil penelitian menunjukkan bahwa rerata kadar CO di ruang parkir bawah tanah Mall Malioboro adalah 20,83 ppm, kadar tertinggi 56 ppm dan kadar terendah 3 ppm, sedangkan rerata kadar Pb 0,598 $\mu\text{g}/\text{m}^3$, kadar tertinggi 0,898 $\mu\text{g}/\text{m}^3$ dan kadar terendah 0,301 $\mu\text{g}/\text{m}^3$. Kadar CO dan Pb berkorelasi positif dengan kepadatan arus kendaraan bermotor yang parkir, berkorelasi positif dengan suhu udara dan berkorelasi negatif dengan kelembaban. Kadar CO dan Pb berfluktuasi setiap waktu dan cenderung mengikuti fluktuasi arus kendaraan bermotor pada ruang parkir bawah tanah. Rerata kadar CO di ruang parkir bawah tanah sudah melampaui Baku Mutu Udara Ambien yang berlaku di DIY, sedangkan rerata kadar Pb belum melampaui Baku Mutu. Meskipun demikian kadar CO dan Pb dapat mempengaruhi kesehatan para pekerja di ruangan parkir tersebut.

Oleh karena itu, diperlukan kewaspadaan dan upaya lain untuk mengurangi pengaruh buruk dari kadar CO dan Pb yang ada, antara lain mengurangi waktu pemaparan para karyawan yang bekerja di ruang parkir bawah tanah.

ABSTRACT

The research entitled 'Carbon Monoxide and Lead Level in Underground Car Park in Shopping Centre of Yogyakarta', aimed to find out the correlation between CO and Pb level with the density of traffic flow, the correlation between CO and Pb level with the air temperature and humidity, and to know the level of air pollution.

The observation on CO and Pb level in underground car park at Malioboro Mall Yogyakarta had been conducted for fifteen hours from seven o'clock a.m. to ten o'clock p.m. for three days. The CO level was tested using *Electronic Gas Analyzer* and dust sample for Pb analysis was taken by *Filter holder*. Analysis of Pb examined by 'Balai Teknik Kesehatan Lingkungan (BTKL) Yogyakarta' laboratory. The methods of analyzing data were correlation analysis and one way analysis of variance.

The results of research showed that the means of CO level in underground car park of Malioboro Mall was 20,83 ppm, the highest level was 56 ppm and the lowest level was 3 ppm, while the means of Pb level was 0,598 $\mu\text{g}/\text{m}^3$, the highest level was 0,898 $\mu\text{g}/\text{m}^3$ and the lowest level was 0,301 $\mu\text{g}/\text{m}^3$. The level of CO and Pb positively correlated to the density of traffic flow in the underground car park, positively correlated to the air temperature and negatively correlated to the humidity. The level of CO and Pb fluctuated all the time and tended to follow the fluctuation of traffic flow in underground car park. The means of CO level had exceeded the quality of ambient air that had been applied in Yogyakarta, while the means of Pb level did not exceed that. However, CO and Pb level may affect the health of employees working in the parking lot.

Therefore, it is important to be aware of bad effect of CO and Pb level in underground car park and try to reduce the time exposure for employees who work in underground car park.

Key words : CO, Pb, air temperature, humidity, underground car park.