

## RINGKASAN

Aerosol timbal merupakan pencemar yang sebagian besar berasal dari gas buang kendaraan bermotor, sehingga udara di sekitar jalan raya mengandung jumlah timbal yang lebih tinggi daripada daerah yang lainnya.

Timbal total di udara ditentukan dengan jalan melewati sampel udara dalam membran filter untuk menangkap timbal partikel dan timbal yang lolos akan diabsorpsi oleh larutan iodin monoklorida, kemudian dikelatikan dengan amonium pirolidin-ditiokarbamat. Untuk penetapannya digunakan spektrofotometri serapan atom.

Dalam penelitian ini sampel udara diambil dari jalan Dr.Cipto dan jalan Teuku Umar Semarang yang mempunyai kepadatan lalu lintas harian rata-rata hampir sama.

Dari hasil penelitian ternyata udara di jalan Dr.Cipto pada jam 06.30 - 07.30 WIB mengandung kadar timbal total sebesar  $0,0815 \text{ mg/m}^3$  dengan konsentrasi timbal partikel  $0,0369 \text{ mg/m}^3$  dan timbal organik  $0,0446 \text{ mg/m}^3$ . Pada jam 07.35 - 08.35 WIB mengandung kadar timbal total sebesar  $0,0521 \text{ mg/m}^3$  dengan konsentrasi timbal partikel  $0,0168 \text{ mg/m}^3$  dan timbal organik  $0,0353 \text{ mg/m}^3$ . Untuk udara pada jalan Teuku Umar pada jam 06.30 - 07.30 WIB mengandung kadar timbal total sebesar  $0,0821 \text{ mg/m}^3$  dengan konsentrasi timbal partikel  $0,0065 \text{ mg/m}^3$  dan timbal organik  $0,0756 \text{ mg/m}^3$ . Pada jam 07.35 - 08.35 WIB mengandung kadar timbal total sebesar  $0,0393 \text{ mg/m}^3$  dengan konsentrasi timbal partikel  $0,0017 \text{ mg/m}^3$  dan timbal organik  $0,0376 \text{ mg/m}^3$ .

Hasil penelitian ini menunjukkan bahwa pada jam 06.30 - 07.30 WIB baik di jalan Dr.Cipto maupun di jalan Teuku Umar kadar timbal total telah melebihi batas ambang yang telah ditetapkan oleh Menteri Kependudukan dan Lingkungan Hidup No.02 / Men.KLH / 1988 sebesar  $0,06 \text{ mg/m}^3$ .

## SUMMARY

Lead aerosol is pollutant that mostly come from exhausted gas vehicles, due to the fact that atmosphere on arterial road contain lead higher than other areas.

Concentration of total lead in the atmosphere were determined by passing air through a membran filter for collecting particulate lead and other lead compounds that passed through the filter were absorbed by iodine monochloride solution, and chelated with ammonium pirolidine-ditiocarbamate. The leads were determined by atomic absorption spectrophotometry.

In this research, atmosphere sample were taken at Dr.Cipto and Teuku Umar streets that had daily density of traffic average almost equal.

From the research resulted that Dr.Cipto atmosphere at 06.30 - 07.30 am contained total concentration of lead  $0,0815 \text{ mg/m}^3$  with concentration of lead particles  $0,0369 \text{ mg/m}^3$  and lead organics  $0,0446 \text{ mg/m}^3$ . At 07.35 - 08.35 am contained total concentration of lead  $0,0521 \text{ mg/m}^3$  with concentration of lead particles  $0,0168 \text{ mg/m}^3$  and lead organics  $0,0353 \text{ mg/m}^3$ . For Teuku Umar street atmosphere at 06.30 - 07.30 am contained total concentration of lead  $0,0821 \text{ mg/m}^3$  with concentration of lead particles  $0,0065 \text{ mg/m}^3$  and lead organics  $0,0756 \text{ mg/m}^3$ . At 07.35 - 08.35 am contained total concentration of lead  $0,0393 \text{ mg/m}^3$  with concentration of lead particles  $0,0017 \text{ mg/m}^3$  and lead organics  $0,0376 \text{ mg/m}^3$ .

The research showed that at 06.30 - 07.30 am the concentration of total lead either Dr.Cipto or Teuku Umar street had been over the treshold limit recommended by Ministry of Population and Environment number 02 / Men.KLH / I / 1988 is  $0,06 \text{ mg/m}^3$ .