

## Gambaran konsentrasi pajanan personal particulate matter 2.5 $\mu\text{m}^2.5$ dan keluhan pernapasan subyektif pada petugas uji mekanis di pusat pengujian kendaraan bermotor PKB unit Ujungmenteng tahun 2015 = description of personal exposure particulate matter 2.5 and subjective respiratory complaints on mechanic in pusat pengujian kendaraan bermotor PKB unit Ujungmenteng in 2015

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### Abstrak

Pajanan PM<sub>2,5</sub> baik dalam jangka pendek maupun jangka panjang, telah diketahui dapat menyebabkan kematian yang salah satunya diakibatkan oleh penyakit pernapasan. Penelitian ini bertujuan untuk mengukur konsentrasi pajanan personal PM<sub>2,5</sub> dan mengukur persentase dari keluhan pernapasan subyektif pada petugas uji mekanis di Pusat Pengujian Kendaraan Bermotor (PKB) Unit Ujungmenteng tahun 2015. Jenis penelitian ini merupakan penelitian deskriptif kuantitatif dengan mengukur konsentrasi pajanan personal PM<sub>2,5</sub> selama jam kerja, menggunakan alat personal sampling seperti Leland Legacy Pump dan Sioutas Cascade Impactor. Subyek penelitian dalam pengukuran pajanan personal PM<sub>2,5</sub> ini ialah sebanyak 21 petugas uji mekanis.

Hasil penelitian ini menunjukkan rata-rata pajanan personal PM<sub>2,5</sub> yang diterima oleh petugas uji mekanis PKB Unit Ujungmenteng ialah sebesar 272,347  $\mu\text{g}/\text{m}^3$ , dimana berdasarkan berbagai penelitian epidemiologi menunjukkan dengan rata-rata pajanan PM<sub>2,5</sub> yang diterima oleh petugas uji mekanis memiliki risiko yang sangat tinggi akan penyakit pernapasan dan kardiovaskular, dan sebanyak 90,5% petugas uji mekanis mengalami keluhan pernapasan, dengan keluhan terbanyak ialah hidung tersumbat/flu (76,2%) dan sakit tenggorokan (57,1%).

.....Exposure of particulate matter 2,5 in both short and long term has been known to cause the death, that caused by respiratory diseases. This study purposed to measure personal exposure concentrations of particulate matter 2,5 and percentage of subjective respiratory complaints on Mechanic in Pusat Pengujian Kendaraan Bermotor (PKB) Unit Ujungmenteng in 2015. This research is quantitative descriptive study by measuring the personal exposure concentration of particulate matter 2,5 during working hours using personal sampling equipment such as Leland Legacy Pump and Sioutas Cascade Impactor. Subjek of research in the measurement of personal exposure PM<sub>2,5</sub> are 21 clerk of mechanical testing.

The result showed the average personal exposure concentrations of PM<sub>2,5</sub> that received by the clerk of mechanical testing amounted to 272,347  $\mu\text{g}/\text{m}^3$ , which is based on various epidemiological studies showed that average personal exposure concentrations of PM<sub>2,5</sub> that received by the clerk of mechanical testing have a very high risk of respiratory and cardiovascular disease, and 90,5% the clerk of mechanical testing experiencing respiratory complaints with the highest complaints is nasal congestion / flu (76,2%) and sore throat (57,1%).