Risiko kesehatan pajanan benzena, toluena dan xylena pada petugas pintu tol dan petugas administrasi = Health risks of exposure to benzene toluene and xylene on collector workers and administration officer at toll gate

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Abstrak

[Sumber utama pencemaran perkotaan adalah transportasi. BTX (Benzene, Toluene dan Xylene) adalah merupakan agen pencemar polutan udara kegiatan transportasi yang berbahaya bagi kesehatan. Petugas pintu tol merupakan kelompok berisiko tinggi terpajan BTX. Penelitian ini menggunakan desain cross-sectional dengan pendekatan Analisis Risiko Kesehatan Lingkungan (ARKL) bertujuan untuk mengetahui besarnya risiko kesehatan akibat pajanan BTX pada petugas pintu tol kebun jeruk Jakarta barat.

Hasil penelitian menunjukkan bahwa pada bagian gardu pintu tol rata-rata konsentrasi (mean+SD) benzena sebesar 0,00167+0,000056 mg/m3, Toluena sebesar 0,00124+0.000049 mg/m3 dan Xylena sebesar 0,00147+0,000063 mg/m3

sedangkan pada kantor administrasi konsentrasi tidak terdeteksi oleh alat (Method Detection Limit). Rata-rata RQ benzene 0,007, toluene 0,00003 dan xylene 0,002

pada petugas tol lebih tinggi dibandingkan dengan rata-rata RQ benzene 0,002, toluene 0,00001 dan xylene 0,007 petugas administrasi. Kesimpulan bahwa risiko nonkarsinogenik BTX semua pekerja memiliki RQ1. Risiko kesehatan nonkarsinogenik dan karsinogenik untuk seluruh pekerja di gerbang pintu tol kebun jeruk pada saat ini belum menunjukkan adanya risiko.

Namun demikian, tindakan pencegahan tetap perlu dilakukan dalam rangka pengendalian risk agent tersebut di masa yang akan datang.

......The main sources of urban pollution is transportation. BTX (Benzene, Toluene and Xylene) is an air pollutant pollutant agent transport activities that are harmful to health. Worker in toll gate is high risk groups exposed to BTX. Design of this study is cross-sectional with Environmental Health Risk Analysis approach to determine the magnitude of health risks due to exposure to benzene, toluene and xylene in the Kebun Jeruk toll gate, west Jakarta. The results showed that at the toll collectors average concentration (mean+SD) was : benzene 0.00167+0.000056 mg/m3, toluene 0.00124+0.000049 mg/m3 and xylene 0.00147+0,000063 mg/m3. while at the administrative office was not detected (Minimum Detection Limit). The average RQ collector workers of benzene was 0.007, toluene was 0.00004, xylene was 0.002, & At administrative officer RQ of benzene was 0.002, toluene was 0.00001, xylene was 0.0006 lower than the average of worker toll gate.

In conclusion, the risk of all workers have the RQ 1. Noncarcinogenic and carcinogenic health risks to all workers at the kebun jeruk toll gate at this point have not shown any risk yet. Nevertheless, protections is needed in order to control the risk of the agent in the future, The main sources of urban pollution is transportation. BTX

(Benzene,

Toluene and Xylene) is an air pollutant pollutant agent transport activities that are harmful to health. Worker in toll gate is high risk groups exposed to BTX. Design of this study is cross-sectional with Environmental Health Risk Analysis approach to determine the magnitude of health risks due to exposure to benzene, toluene and xylene in the Kebun Jeruk toll gate, west Jakarta. The results showed that at the toll collectors average concentration (mean+SD) was : benzene 0.00167+0.000056 mg/m3, toluene 0.00124+0.000049 mg/m3 and xylene 0.00147+0,000063 mg/m3. while at the administrative office was not detected (Minimum Detection Limit). The average RQ collector workers of benzene was 0.007, toluene was 0.00004, xylene was 0.002, & At administrative officer RQ of benzene was 0.002, toluene was 0.00001, xylene was 0.0006 lower than the average of worker toll gate. In conclusion, the risk of all workers have the RQ ≤ 1. Noncarcinogenic and carcinogenic health risks to all workers at the kebun jeruk toll gate at this point have not shown any risk yet. Nevertheless, protections is needed in order to control the risk of the agent in the future]