

## Analisis risiko kesehatan akibat pajanan toluene pada karyawan bengkel mebel x di Jatinegara tahun 2016 = Health risk analysis from toluene exposure on employees of furniture workshop x in Jatinegara 2016

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### Abstrak

Penggunaan bahan kimia telah berkembang luas pada berbagai sektor industri baik formal maupun non-formal, termasuk industri mebel. Produk dengan bahan kimia dipakai untuk membantu meningkatkan kualitas dan keindahan produk mebel. Cat, thinner, dan pelitur adalah produk berbahan kimia yang biasa dipakai dalam pembuatan mebel. Toluene adalah komponen atau campuran bahan kimia utama yang terdapat dalam cat, thinner, dan pelitur.

Penelitian ini bertujuan untuk Menganalisis tingkat risiko pajanan Toluene pada karyawan bengkel mebel X di Jatinegara. Untuk menentukan tingkat resiko, Sample toluene di udara diambil menggunakan Coconut Shell Charcoal lalu dianalisis dengan Gas Chromatography untuk mendapatkan nilai konsentrasi toluene. Konsentrasi toluene tertinggi berada di titik 5 yaitu area cat kursi sebesar 22.975 mg/m<sup>3</sup>.

Berdasarkan perhitungan RQ pada 33 pekerja di bengkel mebel, didapatkan bahwa untuk pajanan realtime sebanyak 61% pekerja memiliki risiko kesehatan non karsinogenik karena nilai RQ > 1. Sedangkan menurut perhitungan RQ lifetime, didapatkan bahwa 88% dari 33 pekerja memiliki risiko kesehatan non karsinogenik karena nilai RQ > 1.

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Use of chemical has grown wider at various sectors in formal and non-formal including furniture industry. Those chemicals were used to improve the quality and beauty of furniture products. Paint, thinner, and varnish are the chemical product that commonly used in the furniture. Toluene is the major chemical contained in paint, thinner, and varnish.

This study attempts to analyze the risk levels of risk exposure on employees of furniture workshop ?X? in Jatinegara. To determine the risk levels, coconut shell charcoals were used in air sampling, and then were analyzed with gas chromatography to get toluene concentration. Highest toluene concentration was at painting area, 22.975 mg/m<sup>3</sup>.

Based on RQ realtime calculation, there were 61% of workers having non carcinogenic health risk because the value of RQ > 1. Acording to RQ lifetime calculation, got that 88% of 33 workers having non carcinogenic health risk because the value of RQ > 1.