

# Hubungan antara pajanan kromium dengan status fungsi hati pekerja di perusahaan alat berat PT X Cakung Cilincing = Correlation between chromium exposure and liver function to worker in heavy equipment manufacturer PT X Cakung Cilincing

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Abstrak

## <b>ABSTRAK</b>

Latar belakang: Pekerja di perusahaan alat berat terutama bagian pengelasan dapat terpajan berbagai macam logam berbahaya yang terdapat pada plat yang digunakan. Salah satu logam yang dapat menyebabkan kerusakan sel bahkan dapat menyebabkan kanker adalah kromium. Hati merupakan salah satu target organ dan sering mengalami kerusakan akibat logam ini. Tujuan penelitian ini adalah mencari hubungan kadar kromium di dalam eritrosit dengan status fungsi hati pekerja.

Metode: Penelitian potong lintang komparasi dilakukan terhadap pekerja yang terpajan dengan pekerja yang tidak terpajan. Data yang digunakan berdasarkan hasil pengukuran fisik, hasil pengukuran kromium eritrosit dan Serum Glutamic Pyruvic Transaminase (SGPT), serta hasil kuisioner.

Hasil: Dari 50 pekerja yang terbagi menjadi 25 orang terpajan dan 25 orang tidak terpajan, terdapat hubungan bermakna secara statistik antara kadar kromium eritrosit dengan masa kerja ( $p=0,044$ ). Tidak terdapat hubungan bermakna secara statistik antara kadar kromium di dalam eritrosit dengan SGPT ( $p=0,814$ ).

Kesimpulan: tidak terdapat hubungan bermakna secara statistik mengenai hubungan kadar kromium dengan kadar SGPT. Namun hasil rerata kadar kromium pekerja tidak terpajan lebih tinggi daripada populasi normal lainnya.

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## <i><b>ABSTRACT</b></i>

Background: worker in heavy equipment manufacturer especially can be exposed to a various kinds of harmful metals contained in the plate. One of metal that can cause cell damage or even cancer which are often used in workplace is chromium. Liver is one of targeted organ could be damaged due to this metal. The purpose of this study is to correlate between chromium level in erythrocytes and welder's liver function status.

Methods: A Cross Sectional Comparative study was conducted to workers who were exposed and unexposed. The data used is based on worker's physical measurement result, chromium level erythrocytes and Serum Glutamic Pyruvic Transaminase (SGPT) results, and also questionnaire.

Results: From 50 workers which are consisted of 25 exposed workers and 25 unexposed workers, there is statistically significant correlation between chromium erythrocytes level and duration of employment ( $p=0,044$ ). There is no statistically significant correlation between chromium level in erythrocytes and

SGPT (p=0.814).

Conclusion: There is no statistically significant correlation between erythrocytes chromium level and SGPT level. But the average result of erythrocytes chromium level of the unexposed workers were higher compare to other normally unexposed workers.</i>