

EVALUASI TEKANAN PANAS (*HEAT STRESS*) LINGKUNGAN KERJA DAN PAJANAN PADA PEKERJA LABORATORIUM DI CIBITUNG BEKASI

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ABSTRAK

Pekerja yang terpajan panas atau bekerja di lingkungan yang panas memiliki resiko mengalami tekanan panas/ *heat stress*. *Heat stress* merupakan faktor fisik yang dapat menimbulkan masalah kesehatan dan keselamatan pada pekerja. Penelitian dilakukan di 2 lokasi yaitu ruang *furnace* dan ruang *fire assay* laboratorium PT. SC di Cibitung Bekasi. Hasil pengukuran nilai Indek Suhu Basah dan Bola (ISBB)/WBGTi untuk ruang *furnace* sebesar 28.6°C (*furnace* tertutup) dan 30°C (*furnace* terbuka). Untuk ruang *fire assay* sebesar 29.6°C (*furnace* tertutup) dan 40.6°C (*furnace* terbuka). Setelah dilakukan analisis berdasarkan Peraturan Menteri Tenaga Kerja dan Transmigrasi Republik Indonesia nomor PER/13/MEN/X/2011 tentang iklim kerja, nilai ISBB melebihi batas normal untuk beban kerja sedang, yaitu 28.0°C. Metode pengambilan data adalah metode sensus. Seluruh pekerja yang bekerja di ruang *furnace* dan *fire assay* berjumlah 11 orang menjadi subyek penelitian telah mengalami pajanan panas. Adanya pajanan panas diketahui dengan pengukuran suhu tubuh, denyut nadi, tekanan darah *sistole* dan *diastole* pada seluruh pekerja. Berdasarkan uji statistik T berpasangan antara suhu tubuh dan lama pajanan panas terdapat perbedaan yang nyata dimana p value < 0.05, yaitu 0.000 dan 0.001. Tekanan panas yang berlebih dapat menyebabkan *heat strain* dan stres kerja pada pekerja.

Kata kunci : tekanan panas (*heat stress*), pajanan panas, ISBB, *heat strain*, stres kerja.

EVALUATION of HEAT STRESS in WORKING ENVIRONMENT and HEAT EXPOSURE to WORKERS LABORATORY, CIBITUNG, BEKASI

ABSTRACT

Workers who are exposed to heat or working in a hot environmental have high risk of experiencing heat stress. Heat stress is a physical factor that may cause health and safety problems to workers. Research has been conducted in two locations, which are furnace chamber and fire assay rooms in PT. SC's Laboratory, Cibitung, Bekasi. The results of WBGTi for the closed furnace and open furnace in furnace chamber are 28.6 °C and 30 °C respectively. While in fire assay room, the results are 29.6 °C and 40.6 °C. After analyzing the results according to Regulations of Minister of Labor and Transmigration Republic of Indonesia (PER/13/MEN/X/2011) about work climate, the WBGTi value exceeds the normal value for mild work load at 28 °C. The method of acquiring the data is the sensus method. All the workers who work in the furnace and fire assay rooms (11 workers) are involved in the research and have experienced heat exposure. The presence of heat exposure was observed by measuring the body temperature, pulse rate and blood pressure (systole/diastole) from all the workers. Based on the coupled T-Test between body temperature and duration of heat exposure, there is significant difference whereby p-values < 0.05, which are 0.000 and 0.001. As conclusion, too much heat pressure may cause heat strain and heat stress to workers.

Key word : heat stress, heat exposure, WBGTi, heat strain, work stress.

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