Analisis risiko pajanan sulfur dioksida (SO2) terhadap kesehatan pekerja di Sentra Industri Keramik Hias Plered (Studi wilayah Kecamatan Plered, Kabupaten Purwakarta, Jawa Barat tahun 2019) = Risk analysis of sulfurdioxide (SO2) exposure to the health of workers in The Industrial Ornamental Ceramics Plered (Study area Plered Subdistrict, Regency of Purwakarta, West Java, 2019)

Ayudhia Rachmawati, author

Abstrak

Tesis ini mengkaji adanya risiko pajanan Sulfur Dioksida (SO2) terhadap kesehatan para pekerja terkait dengan gejala gangguan pernapasan di Sentra Industri Keramik Plered, Kabupaten Purwakarta. Industri keramik menghasilkan SO2 yang berasal dari penggunaan bahan bakar kayu dalam proses pembakarannya. Penelitian ini menggunakan desain Public Health Assessment (PHA), dimana metode pararosanilin digunakan dalam pengambilan sampel udara pada 6 titik lokasi. Hasil pengukuran SO2 menunjukkan bahwa konsentrasi masih dibawah baku mutu yang ditetapkan, yakni rata-rata 0,042 ppm. Besar sampel dalam penelitian adalah 97 pekerja, dalam mengukur keluhan kesehatan pekerja terkait dengan gangguan pernapasan digunakan metode wawancara, dimana sebanyak 69 pekerja (71,1%) mengalami gejala gangguan pernapasan diantaranya batuk, dahak, sesak napas, mengi, nyeri dada, dan napas berat. Intake pajanan SO2 dihitung berdasarkan pada pola aktivitas dan karakteristik antropometri pekerja hingga didapatkan nilai rata-ratanya sebesar 0,0109 mg/kg/hari. Sedangkan estimasi besar risiko menyatakan bahwa sebanyak 3 pekerja (3,1%) berada pada kelompok berisiko atau tidak aman. Adapun tidak adanya perbedaan atau hubungan antara gejala gangguan pernapasan antara intake 0,0109 mg/kg/hari dengan intake > 0,0109 mg/kg/hari, meskipun pekerja dengan intake > 0,0109 mg/kg/hari berpeluang 2,2 kali lebih besar untuk mengalami gejala gangguan pernapasan dibandingkan pekerja dengan intake 0,0109 mg/kg/hari (OR=2,206; CI 95%: 0,891-5,465). Pentingnya upaya penyuluhan dalam rangka meningkatkan kesadaran para pekerja terkait penggunaan APD yang dapat didukung oleh seluruh pihak yang terkait demi menjaga dan meningkatkan produktivitas kerja.

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This thesis examines the risk of Sulfur dioxide (SO2) exposure to the worker's healthrelated to the symptoms of respiratory impairment in the Ceramics Industry Plered, Purwakarta-District. Ceramic industry produces SO2 derived from the use of wood fuel in its combustion process. The study uses the Public Health Assessment (PHA) design, where the pararosanilin method is used in air sampling at 6 point locations. The measurement of the SO2 result indicates that the concentration is still below from the threshold value, which is an average of 0.042 ppm. The sample size in the study was 97 workers, in measurement respiratory impairment used interview methods, whereas many as 69 workers (71.1%) experiencing respiratory impairment symptoms include cough, phlegm, breathlessness, wheezing, chest pain, and severe breathing. Intake of SO2 exposure calculated based on the pattern of activity and characteristics anthropometry worker until the average value of 0.0109 mg/kg/day. While the large estimate of risk states that as many as 3 workers (3.1%) be in a risky or unsafe group. The absence of differences or relationship between the symptoms of respiratory disorders between the intake 0.0109 mg/kg/day with the intake > 0.0109

mg/kg/day, although the worker with the intake > 0.0109 mg/kg/day with an opportunity of 2.2 times greater to experience symptoms of respiratory disorders than workers with the intake 0.0109 mg/kg/day (OR = 2.206; CI 95%: 0.891-5.465). The importance of the extensive efforts to raise the awareness of workers related to the use of the PPE that can be supported by all stakeholders to maintain and improve the productivity of work.