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ABSTRAK

Prehatin Tri Rahayu Ningrum

Faktor Lingkungan dan Perilaku yang Berhubungan dengan Gangguan Fungsi Paru pada Pekerja Unit II Pengolahan NPK di Industri PT.Petrokimia Gresik

xii + 117 halaman + 24 tabel + 21 gambar + 34 lampiran

Pemaparan debu organik dan anorganik pada umumnya akan menyebabkan obstruksi pada saluran pernapasan yang ditunjukkan dengan penurunan %FEV1/%FVC. Pekerja bagian pengolahan NPK di PT. Petrokimia Gresik mempunyai risiko untuk penimbunan debu pada saluran pernapasan. Tujuan penelitian ini adalah menganalisis paparan debu dan gangguan fungsi paru pada pekerja pengolahan NPK di PT. Petrokimia Gresik di Kabupaten Gresik. Penelitian ini dilakukan dengan studi observasional dengan pendekatan *cross sectional* sebagai sampel sebanyak 30 orang. Teknik sampling menggunakan rancangan *purposive sampling*. Data konsentrasi debu terhirup diperoleh pengukuran dengan menggunakan alat *personal dust sampler* dan pengukuran fungsi paru dengan menggunakan spirometer. Data dianalisis secara bivariat dengan *Chi Square* dan multivariate dengan regresi logistik. Hasil penelitian menunjukkan kadar debu yang terhisap dalam alat HVS (*High Volume Sampler*) di PT. Petrokimia Gresik bagian Pengolahan NPK di dua titik yaitu *crusher* sebesar 2,0597 mg/m³ dan pengantongan sebesar 1,4562 mg/m³. Hasil pengukuran debu menunjukkan bahwa konsentrasi debu pada lokasi ini masih di bawah Nilai Ambang Batas. Sedangkan hasil kadar debu terhirup sebagian besar berada diatas Nilai Ambang Batas dengan rata-rata 1,136 mg/m³. Nilai rata-rata %FEV1/%FVC pada responden sebesar 86,15 %. Hasil penelitian didapatkan faktor yang berhubungan dengan gangguan fungsi paru adalah paparan debu terhirup (p=0,020), kebiasaan menggunakan masker (p=0,023), riwayat penyakit (p=0,023). Faktor yang tidak berhubungan dengan gangguan fungsi paru adalah masa kerja (p=0,202) dan lama kerja/durasi kerja (p=0,884). Dapat disimpulkan bahwa ada hubungan antara paparan debu terhirup, kebiasaan menggunakan masker dan riwayat penyakit dengan gangguan fungsi paru.

Kata kunci : Paparan debu, gangguan fungsi paru, pekerja, pengolahan NPK
Kepustakaan : 55 (1986-2009)

ABSTRACT

Prehatin Tri Rahayu Ningrum

Environmental and Behavioural Factor in Relation to Lung Function Disorder on Workers at Unit II NPK Production Section in Industry PT. Petrokimia Gresik

xii + 117 page + 24 tabels + 21 figure + 34 attachments

Dust generated from processes of Nitrogen Phosphate Potassium (NPK) fertilizer production, can disperse in the workplace and harm to the workers. Generally, organic and inorganic dust exposure will cause obstruction of respiratory tract and indicated by decreasing of %FEV1/%FVC level. Workers of NPK production section in PT. Petrokimia Gresik have high risk from dust deposition on their respiratory tract. This research purpose to analyze the exposure of dust and lung function disorder on workers of NPK production section PT. Petrokimia Gresik, in Gresik Regency. This research was an observational research with a cross sectional design and 30 samples were taken. Sampling was carried out by using a purposive sampling technique. Data of respirable dust concentration measured by personal dust sampler, whereas data of lung function was taken by Spirometer. Data were analyzed by chi-square and multivariate by regresi logistic technique. Result of the research showed that dust grade of concentration collected by device High Volume Sampler (HVS) devices at PT. Petrokimia Gresik NPK production section of two site in crusher section was measured $2,0597 \text{ mg/m}^3$ and in packaging section was measured $1,4562 \text{ mg/m}^3$. Result of dust concentration showed that dust on this location was still under the National Threshold Value, although it right give an edverse effect for workers. Result of respirable dust grade shows National Threshold Value of above and average value $1,136 \text{ mg/m}^3$. Average value %FEV1/%FVC to workers 86,15%. The result of the research showed that factors which were related to the lung function disorder were exposure to respirable dust ($p=0,020$), the habit of using personal protective device ($p=0,023$), and history of diseases ($p=0,023$). Factors which were not related to the lung function disorder were working period ($p=0,202$) and time of work/work duration ($p=0,884$). It can be concluded that there were relationship between exposure respirable dust, habit of using personal protective devices and historical disease of workers and lung function disorder.

Keyword : Dust Exposure, Lung Function Disorder, Workers, NPK Production
Bibliographies : 55 (1986-2009)