

## ABSTRACT

Adhiningrum Dwi Sekar Tunjung

### DISTANCE TO STAY FROM INDUSTRIAL LOCATION AND DUST LEVEL AGAINST THE DECLINE IN FUNCTION OF THE COMMUNITY PULMONARY FAAL IN THE SURROUNDING INDUSTRIAL ENVIRONMENT

XIII + 65 pages + 8 tables + 3 Attachments

Tile industry is an industry engaged in the manufacture of tile. In the process of making industrial tile products can produce waste air in the form of dust. Problems that occur in society arise symptoms of respiratory complaints such as sneezing, shortness of breath, cough, and chest pain. The purpose of this research is to know the influence of distance difference in housing to the decline in function of the community's lung Faal around industrial tile Surabaya.

This study uses literature studies as a comparison of some data from various journal references by noting the similarities between variables with variable dust levels, distance differences, and decreased pulmonary faal function.

The results obtained from this study were average Particulate Matter<sub>10</sub> dust levels at a distance of 100m obtained  $230\mu\text{g}/\text{Nm}^3$ , and a distance of 300m of  $143\mu\text{g}/\text{Nm}^3$  with an average particulate Matter<sub>10</sub> dust level of  $186,5\mu\text{g}/\text{Nm}^3$ . Chi-Square test results obtained  $P = 0,157/P > 0,05$  then  $H_0$  received, the air quality is physically humidity 65.3% at a distance of 100 m and 300m. Respondents in the category of normal pulmonary Faal function amounted to 9 (20%), while the function of pulmonary faal is not normal amounted to 36 (80%).

Conclusions from the results of this literature study that there is an influence between the distance of housing and dust content Particulate Matter<sub>10</sub> ( $P = 0,000$ ) to the decline in function of the Faal industrial tile industry, so it is advised to the industry to routinely monitor the air. People are advised to use APD in the form of masks when outside the house.

Keywords: housing distance, dust level PM<sub>10</sub>, lung Faal function

Reading list: 31 (1997-2020)



## ABSTRAK

Adhiningrum Dwi Sekar Tunjung

### JARAK TEMPAT TINGGAL DARI LOKASI INDUSTRI DAN KADAR DEBU TERHADAP PENURUNAN FUNGSI FAAL PARU MASYARAKAT DI LINGKUNGAN SEKITAR INDUSTRI

XIII+ 65 Halaman + 8 Tabel + 3 Lampiran

Industri genteng merupakan industri yang bergerak di bidang pembuatan genteng. Dalam proses pembuatan produk Industri Genteng dapat menghasilkan limbah udara berupa debu. Masalah yang terjadi pada masyarakat timbulnya gejala gejala keluhan pernafasan diantaranya bersin-bersin, sesak nafas, batuk, dan dada terasa nyeri. Tujuan dari penelitian ini adalah mengetahui pengaruh perbedaan jarak tempat tinggal terhadap penurunan fungsi faal paru masyarakat di sekitar Industri Genteng Surabaya.

Penelitian ini menggunakan studi literature sebagai pembanding beberapa data dari berbagai refrensi jurnal dengan memperhatikan persamaan antar variabel dengan variabel kadar debu, perbedaan jarak, dan penurunan fungsi faal paru.

Hasil yang diperoleh dari penelitian ini adalah rata-rata kadar debu Particulate Matter<sub>10</sub> pada jarak 100m didapatkan  $230\mu\text{g}/\text{Nm}^3$ , dan jarak 300m sebesar  $143\mu\text{g}/\text{Nm}^3$  dengan rata-rata kadar debu Particulate Matter<sub>10</sub> yaitu  $186,5\mu\text{g}/\text{Nm}^3$ . Hasil uji Chi-Square diperoleh  $P=0,157/P>0,05$  maka  $H_0$  diterima, kualitas udara secara fisik kelembaban 65,3% pada jarak 100 m dan 300m. Responden berkategori fungsi faal paru normal berjumlah 9(20%), sedangkan fungsi faal paru tidak normal berjumlah 36(80%).

Kesimpulan dari hasil studi literature ini yaitu ada pengaruh antara jarak tempat tinggal dan kadar debu Particulate Matter<sub>10</sub> ( $P=0,000$ ) terhadap penurunan fungsi faal masyarakat industri genteng sehingga disarankan kepada industri untuk melakukan pemantauan udara secara rutin. Masyarakat disarankan menggunakan APD berupa masker pada saat berada diluar rumah.

Kata Kunci : Jarak Tempat Tinggal, Kadar Debu  $\text{PM}_{10}$ , Fungsi Faal Paru

Daftar Bacaan : 31 (1997-2020)