# ABSTRAK

## PENGARUH PAJANAN DEBU TEPUNG TERHADAP NILAI *FORCED EXPIRATORY FLOW* 25-75% (FEF $_{25-75\%}$)PADA PEKERJA PABRIK ROTI (TERPAJAN DAN TIDAK TERPAJAN)

### Latar Belakang

Pajanan debu tepung dapat menyebabkan gangguan di saluran napas kecil. Gangguan ini dapat dinilai dengan pemeriksaan faal paru yaitu dengan menilai *Forced expiratory flow* 25-75% (FEF $_{25-75\%}$) pada pekerja pabrik roti.

### Metode

Penelitian ini menggunakan studi analitik observasional dengan tehnik *Cross Sectional.* Subjek penelitian ini adalah para pekerja pabrik pengolahan roti di daerah Gresik, Jawa Timur. Jumlah sampel merupakan total sampel pekerja yang berada dibagian terpajan (produksi) maupun tidak terpajan (non produksi) yang memenuhi kriteria insklusi. Subjek dilakukan pemeriksaan spirometri untuk menilai FEF $_{25-75\%}$ dan menilai apakah ada penurunan nilai FEF $_{25-75\%}$ pada pekerja yang terpajan debu tepung maupun yang tidak terpajan.

### Hasil

Didapatkan sebanyak 19 sampel pekerja pabrik roti yang memenuhi kriteria insklusi. Terdapat adanya perbedaan bermakna nilai FEV1/FVC antara pekerja terpajan dan tidak terpajan dengan nilai p 0,011 ($p < 0,05$) begitu pula dengan hasil pengukuran nilai FEF $_{25-75\%}$ adanya perbedaan bermakna antara pekerja yang terpajan dengan pekerja yang tidak terpajan dengan nilai p 0,002 ($p < 0,05$).

### Kesimpulan

Terdapat penurunan nilai FEF $_{25-75\%}$ pada pekerja pabrik roti yang terpajan dibandingkan pekerja yang tidak terpajan.



### Kata kunci :

Debu tepung, FEF $_{25-75\%}$, pekerja terpajan dan tidak terpajan

## ABSTRACT

## THE EXPOSURE EFFECT OF FLOUR DUST ON FORCED EXPIRATORY FLOW 25-75% (FEF 25-75%) IN BAKERY FACTORY WORKERS (EXPOSED AND UNEXPOSED)

### Background

Flour dust exposure can cause small airway irritation. This disorder can be assessed by examining lung function, namely by assessing the forced expiratory flow of 25-75% ($FEF_{25-75\%)}$ in bakery factory workers. This study can provide information and an initial screening for workers suspected of having lung abnormalities due to exposure to work materials

### Method

This study is an observational analytic study with a cross sectional technique. The subjects of this study were workers at a bread factory in the Gresik area, East Java. The samples is the total sample of workers who are in the exposed (production) and non-exposed (non-production) that fulfilled inclusion criteria in this study. All of the sample was examined for lung function test to assess $FEF_{25-75\%}$

### Result

There were 19 samples of bakery workers that fulfilled inclusion criteria in this study. There is a difference in the FEV1 / FVC value between exposed and unexposed workers with a p value of 0.011 ($p < 0.05$) as well as the results of FEF 25-75%, there is a difference between exposed workers and unexposed workers with p value 0.002 ($p < 0.05$)

### Conclusion

There is a decrease of $FEF_{25-75\%}$ in exposed bakery workers compared to unexposed workers



### Keywords

Flour dust, $FEF_{25-75\%,}$ workers exposed and unexposed