

**ABSTRACT**

Tobacco is one of the most consumed legal addictive drugs in Indonesia. One of the side effects of smoking tobacco is anatomical change of respiratory ducts which affects lungs physiology. From here, the author would like to investigate how smoking tobacco affect lungs physiology from peak expiratory flow rate measurement in young adults male.

The research is conducted in the campus ground of Universitas Airlangga with questionnaire and direct measurement of peak expiratory flow rate taken from portable peak flow meter. Subject are 100 in total, 50 are smokers and 50 are non-smokers. Subjects are chosen from random accidental sampling. The data was processed by counting the mean and standard deviation every population and next comparing actual value and prediction value of peak expiratory flow rate using independent-sample t-test with confidence interval (CI) 95%.

The result shows that mean value of peak expiratory flow rate in smoker population actual value is 557.4 with prediction value 93.8% ; while non-smoker population has 567.4 in actual value with prediction value 94.65%. Significance value is 0.41 ( $> 0.05$ ) and the t-value is -0.827 which is lower than the value in t-table (1.661). The conclusion is the peak expiratory flow rate in smoker population is lower than non-smoker population, but the difference is not significant.

**Kata kunci:** *Peak flow meter, rokok, Arus Puncak Ekspirasi*