The risk quotient of sulfide hydrogen toward lung vital capacity of people living around landfill area / Mohammad Zulkarnain, Rostika Flora, Novrikasari, Toto Harto, Dwi Apriani, Novita Adela

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Abstrak

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Waste is one of factors causing air pollution in Palembang City. Volume of waste that should be processed increases every day, while condition of waste management service is still 70% of the total volume. The waste processing is managed by using open dumping system, which affects on the increase of air pollution. One of gases that exist as effect of the process of organic compound decomposition of anaerobic bacteria from garbage is sulfide hydrogen (H2S) pollutant which can promote health disorders, especially respiratory system. This study aimed to analyze correlation between characteristics (age, sex, nutritional status, smoking, and living distance) and the risk quotient of sulfide hydrogen concentration in air ambient to the lung capacity of people around landfill area. This study used cross-sectional design with the sample of 78 people around landfill area. Data analysis used double logistic regression. Results showed that nutritional status (p value = 0.022, OR = 12.085) and RQ (p value = 0.016; OR = 7.547) significantly related to lung vital capacity of people around landfill area. People around landfill area having worse nutrition and lower RQ than the median were potential to have lung vital capacity disorder. The dominant variable significantly influencing to lung vital capacity of people living around Sukawinatan Landfill is nutritional status.