

# ENVIRONMENTAL HEALTH ANALYSIS OF PM<sub>2.5</sub> EXPOSURE TO STREET VENDORS AT DRIYOREJO SUB-DISTRICT IN 2022

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## ABSTRACT

Air pollutant with Particulate Matter (PM<sub>2.5</sub>) in Driyorejo Subdistrict have exceeded the standards based on PP RI No. 41 Tahun 1999 of 0,0767mg/m<sup>3</sup>. These conditions can caused public health problems and harm the quality of the environment. The purpose of this research, was to analyze the magnitude of PM<sub>2.5</sub> risk to street vendors in Driyorejo Sub-District.

The Environmental Health Risk Analysis (ARKL) method with a cross-sectional type of quantitative descriptive research was used in study. The sampling technique was carried out by purposive sampling of 78 respondents. Air sampling would be carried out at 3 location points in a dense industrial and transportation area at Driyorejo Sub-District. The dat a analysis method used univariate analysis and PM<sub>2.5</sub> concentration analysis to calculate PM<sub>2.5</sub> intake and determine risk characterization in respondents.

The results of the study explained that the concentration at the three locations points below quality standart based on PP RI No. 41 of 1999 concerning Air Polution Control is 0,065 mg/m<sup>3</sup>. The minimum, average, and maximum values of PM<sub>2.5</sub> concentration measurements with *RfC* value of 0,018 mg/kg/hari were used for ARKL calculations. Individual RQ values and all three location points for minimal and maximum concentration are obtained *RQ*<1.

The conclusions of this study that the risk level of PM<sub>2.5</sub> exposure is safe at maxium or minimum concentrations for street vendors. The advice given to provide counseling to street vendors and the wearing masks.

**Keyword :** ARKL, *Particulatte Matter* (PM<sub>2.5</sub>), Industri, Transportation.