

RISK ANALYSIS OF EXPOSURE TO SULFUR DIOXIDE (SO₂) GAS COMBUSTION OF WASTE COMBUSTION AT INTEGRATED WASTE TREATMENT

(Case Studi : Integrated Waste Management Site in Bambe Village,
Driyorejo Sub-District, Gresik District in 2022)

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ABSTRACT

Burning household waste and tire rubber as a trigger for burning waste can produce SO₂ gas which poses a risk to the health of the surrounding community. This study aims to analyze the risk of exposure to Sulfur Dioxide (SO₂) gas from waste burning at the Integrated Waste Treatment Plant (TPST) bambe village, Driyorejo district, Gresik regency.

This research uses the Environmental Health Risk Analysis (ARKL) approach method with a *cross-sectional* type of quantitative descriptive research. The sampling technique uses *the purposive sampling* method with a sample of 100 respondents. Air sampling was carried out at 3 location points with 3 repeats. The data analysis method used is risk analysis to determine the risk characteristics of people exposed to SO₂ gas.

The results showed that the concentration of SO₂ gas at the three location points did not exceed the quality standard of Government Regulation R1 No. 41, which was 0.059 mg / m³. Based on the minimum, average and maximum gas measurements of SO₂ with rfc values of 0.026 mg / kg / day for ARKL calculations, RQ values were obtained at all three locations, namely RQ < 1.

The conclusion of this study, the level of risk of exposure to SO₂ gas in the community is not at risk or is in a safe condition As for the advice that can be done, namely checking the gas regularly and planting plants to reduce pollutants.

Keywords : Risk analysis, SO₂ gas, burning waste
Reading List : 43 (1999-2021)