

**ABSTRACT**

**RAHMI MAULANI**

***ANALYSIS OF ENVIRONMENTAL HEALTH RISK EXPOSURE OF WOOD DUST IN INFORMAL SECTOR FURNITURE WORKERS***

***(Study at KS Bahan Bangunan Leuwianyar Street Tasikmalaya City)***

*The process of processing wood in furniture tends to produce wood dust which can have a negative impacts on health. The aim of this research was analyzed the environmental health risks of exposure to wood dust on workers health. This research was quantitative descriptive with a cross sectional design and uses an Environmental Health Risk Analysis (EHRA) approach. The sample in this research were all workers at KS Bahan Bangunan Informal Furniture, totaling 15 people. Data collection regarding time of exposure, frequency of exposure, and duration of exposure was carried out through interview used questionnaires instrument, and measured wood dust concentration using a dust sampler. Data were analyzed using univariate analysis and EHRA. The research results showed that the exposure time of workers is 9.4 hours/day, with mean exposure frequency of 320 days/year, and the mean exposure duration has been 20 years. The results of measuring the concentration of wood dust in the cutting section were 5.9 mg/m<sup>3</sup>, in the planing section 3.105 mg/m<sup>3</sup>, in the sanding section 4.9 mg/m<sup>3</sup>, and the mean concentration of wood dust at the research location was 4.638 mg/m<sup>3</sup>. The result of EHRA calculations showed that the minimum and maximum intake for real-time exposure is 0.059 mg/kg/day and 0.615 mg/kg/day. Meanwhile, for lifetime exposure with a 30 year projection, the minimum and maximum intake values were 0.294 mg/kg/day and 0.71 mg/kg/day. The risk characterization results showed that in real-time exposure there were 2 workers who had unsafe health risks (RQ>1), while in lifetime exposure there were 4 workers who had unsafe risks (RQ>1). Therefore, risk management is needed by reducing concentration, exposure time and exposure frequency to safe limits. Apart from that, risk management needs to be carried out using a technical approach, administrative approach and the use of Personal Protective Equipment (PPE) for workers.*

*Keyword : Wood Dust, Informal Furniture, EHRA.*