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Abstract Book

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RISK ANALYSIS OF EXPOSURE TO HYDROGEN SULFIDE AND AMMONIA ON THE SCAVENGERS OF TAMANGAPA LANDFILL - MAKASSAR CITY

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The objective of this research was to determine the Risk Quotient (RQ) of H₂S and NH₃ on landfill trash scavengers in villages Tamangapa and Mangala in district of Makassar, Indonesia. The observational research applied with Environmental Health Risk Analysis. The sample in this study was drawn as many as 95 samples using a purposive sampling technique. Data were analyzed using several formulas in Environmental Health Risk Analysis to determine major risk or Risk Quotient (RQ).

The results of this study indicate that the average concentration of H₂S in landfill waste in Tamangapa village is 0.108 mg/m³ while the average concentration of NH₃ is 0.637 mg/m³. The average value of RQ scavengers in garbage landfill Tamangapa exposed to H₂S is 6.53 meaning that the probability of suffering from diseases caused by exposure to H₂S gas is equal to 6.53, while the average RQ value for NH₃ is 0.77 meaning that the probability of suffering from diseases caused by exposure to NH₃ gas is equal to 0.77. The number of respondents who have a RQ>1 for H₂S is 97.9% (n=93), while the RQ>1 for NH₃ is 23.2% (n=22). The amount of intake air containing H₂S and NH₃ are safe begin scavenger activity in landfill Tamangapa for 5 years is an average of 1.14 m³/day or 2.43 hours/day for up to 35 kg body weight; or 2.46 m³/day 5.24 hours/day for body weight 75 kg. The duration of exposure is safe from the risk of H₂S and NH₃ begin noncarcinogenic scavenger activity in Tamangapa Waste Landfill is the average of 1.22 years for body weight 35 kg up to 2.60 years for body weight 75 kg.

OP 23-2

ENVIRONMENTAL AND SOCIOECONOMIC FACTORS ASSOCIATED WITH THE TRANSMISSION OF INTESTINAL PARASITIC INFECTIONS IN MALAYSIA FROM 1970 TO 2010

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Intestinal parasitic infections are still considered as one of the major public health problem in most developing countries. To determine the effectiveness of prevention and control of intestinal parasites in relation to socioeconomic and environmental factors in Malaysia, an observational cross sectional study was done. Students between the ages of 6-12 years were selected, using systemic sampling method. Questionnaires were used to collect the demographic profile of schoolchildren. Stool samples collected were analysed using direct smear and formal ether sedimentation technique. The results of the study were used to compare the results of the past 40 years in Malaysia.

Intestinal parasites are seen in 32.5% of the 123 urban poor children, and 45.6% of the 149 rural children examined. The most common parasites are Trichuris trichiura (25.7%) followed by Ascaris lumbricoides (14%) and hookworm (9.6%). No cases of hookworm were reported among the urban schoolchildren, whereas 17.4% of rural schoolchildren were positive for hookworm. The most common protozoan parasite was Entamoeba coli (3.7%) followed by Entamoeba histolytica (1.8%). Most of the children had single infection (22.8%) followed by those with double infection (14.3%), and triple infection (2.6%). The infection was more common in girls (42.4%) and less in boys (37.1%). The infection rates were highest among the Orang Asli (77.3%) followed by Indians (40%), Malays (18.9%), and Chinese (15.1%). Review of literature on intestinal parasites from 1970 to 2010 indicates that the prevalence of intestinal infection varied from as high as 92.1% in 1983, and decreased to 39.7% in 2010. Improved living conditions, better environmental sanitation together with better socioeconomic status, improved healthcare education, and efforts of the government are necessary to decrease the prevalence of intestinal parasites in Malaysia.

OP 23-3

ENVIRONMENTAL RISK FACTORS OF MALARIA CASES AT LAHAT DISTRICT SOUTH SUMATRA PROVINCE, INDONESIA

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