

## C126002 : MAJOR ENVIRONMENTAL SCIENCE

KEY WORD : BLOOD LEAD/LEAD SMELTER/LEAD

RACHADAPORN ISSARIYAVES : BLOOD LEAD OF CHILDREN

LIVING NEAR A SMELTER. THESIS ADVISER : ASSO. PROF.

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Blood lead of children, approximately 3-9 years old, who live in a lead smelter and that of children who live in a community within 1 kilometre from the smelter were determined by atomic absorption spectrophotometry. Then the results were compared with that of a control group. A self-designed questionnaire was utilized to gather some related data from the parents.

The findings of the study were that mean blood lead of children living in the smelter was the highest one, followed by that of children living in the community and that of the control group, which were 78.66, 27.81, and 21.76 micrograms per decilitre respectively. Nonparametric statistics indicated that the three groups were greatly different, at .0001 level of significance. Relative risk evaluation implied that living in the community within 1 kilometre from the smelter significantly increased the risk of having blood lead level more than 25 micrograms per decilitre 10 times of those living in the community farther from the smelter.