### DETERMINATION OF LEAD LEVEL IN BLOOD OF CHIANG MAI CITY TRAFFIC POLICEMEN BY STRIPPING ANALYSIS

MARIA LOURDES NANETTE DEZA CATALON

# A THESIS SUBMITTED TO THE GRADUATE SCHOOL IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF SCIENCE IN ENVIRONMENTAL RISK ASSESSMENT FOR TROPICAL ECOSYSTEMS

GRADUATE SCHOOL
CHIANG MAI UNIVERSITY
MARCH 1997

#### DETERMINATION OF LEAD LEVEL IN BLOOD OF CHIANG MAI CITY TRAFFIC POLICEMEN BY STRIPPING ANALYSIS

#### MARIA LOURDES NANETTE DEZA CATALON

## THIS THESIS HAS BEEN APPROVED TO BE A PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF SCIENCE IN ENVIRONMENTAL RISK ASSESSMENT FOR TROPICAL ECOSYSTEMS

#### **EXAMINING COMMITTEE**

Asst. Prof. Dr. Yuthsak Vaneesorn

Prapamontol

MEMBER

Asst. Prof. Dr. Surasak Watanesk

27 March 1997

Copyright of the Graduate School, Chiang Mai University

#### **ACKNOWLEDGEMENTS**

It takes a lot of people to come up with relevant research work. This one is no exception.

I acknowledge the Deutsche Gessellschaft für Technische Zusammenarbeit (GTZ), GmbH through the Environmental Risk Assessment (ERA) Programme -- a joint program between Chiang Mai University, Thailand and the University of Saarland, Federal Republic of Germany -- for the opportunity to pursue the International Master's Degree in ERA.

My sincere gratitude is extended to my thesis supervisors, Asst. Prof. Dr. Yuthsak Vaneesorn and Dr. Tippawan Prapamontol, for their kind guidance and encouragement throughout the study period, and to Asst. Prof. Dr. Surasak Watanesk for his support in my work.

In particular for special services, I want to thank:

Ms. Tasanai Vongchak from the Research Institute for Health Sciences (RIHES), Chiang Mai University for coordinating the blood collection activities and her assistance in data handling; and the rest of the research team from RIHES -- Mrs. Charintarat Kitisri, Mrs. Wipada Cheewawat and Mrs. Onsri Short -- for their efficient collection of the blood samples;

the staff of the Department of Chemistry Central Supply Room for their assistance in making chemicals and other laboratory materials at my disposal in the quickest possible time; the staff of the Chemistry Repair Shop for their technical assistance; and the staff from the Division of Biochemistry Research (Laboratory 3) (RIHES) for the kind assistance they have given me during the few times I worked in Lab. 3; and

Potjaman Poulmee who kindly translated some local references and encoded my abstract in the Thai language and whose cheerful company made the seemingly endless days in the laboratory less dull.

To my ERA colleagues from different countries, especially *Anh* (Vietnam) and *Manasa* (Thailand) who, by allowing me to share in their lives, have given me more than they will ever know -- my sincere thanks.

To the other members of ERA Class 1997 - Guruge, (Sri Lanka), Kafle (Nepal), Lita (Philippines), Luo (China), Monyrak (Cambodia), Nilo (Philippines), Siriporn (Thailand), and Wang (China) -- thank you for making my two-year stay in Thailand more unique, interesting and of course, fun.

To my juniors in the ERA Programme, for your cheerful company and the fun times shared -- thanks a lot.

I would also like to thank some friends -- Aom and Pik for their friendship; Chinarom (Kung) whose warm welcome for me to Chiang Mai has since become a friendship I will always treasure; the Filipino community in Chiang Mai -- especially Bert and Marina, and Ate Vicky and family -- who have taught me so much in the friendship they offer; and to ED, for being the kind of friend I cherish.

The selfless love, unfailing support and encouragement from my parents, my brothers and sisters -- BingBing, BongBong and Sassa, especially -- constantly inspire me not only to give my best in everything but also to find joy and relevance in everything that I do. For these and much more, I am deeply grateful.

Of course -- this would not be without Him above.

Maria Lourdes Nanette D. Catalon

March 1997