

**ANTIOXIDATIVE ACTIVITY OF POLYPHENOLIC COMPOUNDS EXTRACTED
FROM SEED COAT OF *Tamarindus indica* Linn.**

GANNIGA PUMTHONG

**A THESIS SUBMITTED TO THE GRADUATE SCHOOL IN
PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF
MASTER OF SCIENCE
IN BIOCHEMISTRY**

**GRADUATE SCHOOL
CHIANG MAI UNIVERSITY
JUNE 1999**

ANTIOXIDATIVE ACTIVITY OF POLYPHENOLIC COMPOUNDS EXTRACTED
FROM SEED COAT OF *Tamarindus indica* Linn.

GANNIGA PUMTHONG

THIS THESIS HAS BEEN APPROVED
TO BE A PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF MASTER OF SCIENCE
IN BIOCHEMISTRY

EXAMINING COMMITTEE

M. Suttajit ----- CHAIRMAN

Associate Professor Dr. Maitree Suttajit

Prapon Wilairat ----- MEMBER

Professor Dr. Prapon Wilairat

P. Limtrakul. ----- MEMBER

Associate Professor Dr. Pom-ngarm Limtrakul

Ratana Banjerpongchai ----- MEMBER

Dr. Ratana Banjerpongchai

June 1999

Copyright by the Graduate school, Chiang Mai University

ACKNOWLEDGEMENTS

The author would like to thank Dr. Maitree Suttajit, her thesis adviser, and Dr. Udompun Khansuwan, Department of Biochemistry, who have been encouraging her during the study. They have intensively helped, lead and advised her to solve problems and to make this thesis accomplished.

She is very grateful to Professor Prapon Wilairat for being a co-examiner, providing her with some chemicals in coupled enzyme assay, and giving a chance in training for membrane preparation for a month in his laboratory, Mahidol University.

She is deeply thankful to Dr. Porn-ngam Limtrakul and Dr. Ratana Banjerdpongchai for being co-examiners and their valuable advice.

A special thank is conveyed to Dr. Prachya Kongtawelert and his graduate students for allowing her to use their equipment and for helping the thesis, and also to Mrs. Nunthaya Chanarat and other staffs at the Faculty of Associated medical science for permitting the author to use the spectrophotometer.

Finally, the author really appreciates her parents, all her teachers, friends, Mr. Worawit Kittiwongsunthorn, her boss and colleagues for their love, tolerance, understanding, and encouragement throughout this study. Without all these persons mentioned above, this thesis would not be developed and accomplished.