

ENTRAPMENT OF TRANEXAMIC ACID IN LIPOSOMES

KOONSUP PODJANASOONTHON

**A THESIS SUBMITTED TO THE GRADUATE SCHOOL IN
PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF
MASTER OF PHARMACY
IN PHARMACEUTICAL TECHNOLOGY**

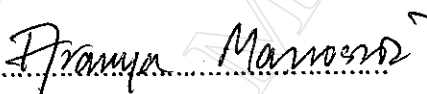
**GRADUATE SCHOOL
CHIANG MAI UNIVERSITY
OCTOBER 2000**

ENTRAPMENT OF TRANEXAMIC ACID IN LIPOSOMES

KOONSUP PODJANASOONTHON

THIS THESIS HAS BEEN APPROVED
TO BE A PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF MASTER OF PHARMACY
IN PHARMACEUTICAL TECHNOLOGY

EXAMINING COMMITTEE



Assoc. Prof. Dr. Aranya Manosroi

CHAIRMAN



Assoc. Prof. Dr. Jiradej Manosroi

MEMBER



Lect. Wilai Thanasarnaksorn, MD

MEMBER

20 October 2000

Copyright by the Graduate School, Chiang Mai University

ACKNOWLEDGEMENT

I would like to express my gratitude to my advisor, Assoc. Prof. Dr. Aranya Manosroi for her moral support, advice, guidance, assistance and especially for her patience in the correcting of my thesis. I am grateful to my co-adviser Assoc. Prof. Dr. Jiradej Manosroi for their valuable help and advice during the experiment and thankful to Lect. Wilai Thanasarnaksorn, MD for her kindness to be a member of the examining committee.

I am thankful to the companies which have donated the high quality compounds for this thesis, JJ-Degussa (T) Ltd., Thailand for the Emulmetik 950[®] and Thistle Corp., Ltd. for tranexamic acid. I am thankful to the financial support from the Research and Development of Natural Products for Thai Traditional Medicines Research Unit, Pharmaceutical Cosmetic Raw Materials and Natural Products Research and Development Center (PCRNC), Institute for Science and Technology Research and Development, Chiang Mai University. I am thankful to Dr. Robert Molloy, Department of Chemistry, Faculty of Science, Chiang Mai University for his advice during the thermal analysis experiment.

I appreciate all personnels and faculty members for their assistances in using the equipments at the Department of Pharmacognosy, Faculty of Pharmacy, and the technicians at the Medical Science Research Equipment Center, Faculty of Medicine, Chiang Mai University. I am very thankful to all of the staffs of the Department of Pharmaceutical Technology for their moral support.

Finally, I would like to be grateful to my parents for their patience and all the supports and thank to all of my friends for their love and encouragement throughout this study.

Koonsup Podjanasoonthon