

**ANALYSIS OF FLUORIDE DISTRIBUTION IN SOIL AT THE
INSTALLATION POINTS OF REVERSE OSMOSIS
DRINKING WATER VENDING MACHINES**

PATCHARAPORN KHAOKHAJORN

**MASTER OF SCIENCE
IN CHEMISTRY**

THE GRADUATE SCHOOL

CHIANG MAI UNIVERSITY

FEBRUARY 2011

**ANALYSIS OF FLUORIDE DISTRIBUTION IN SOIL AT THE
INSTALLATION POINTS OF REVERSE OSMOSIS
DRINKING WATER VENDING MACHINES**

PATCHARAPORN KHAOKHAJORN

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

**THE GRADUATE SCHOOL
CHIANG MAI UNIVERSITY**

FEBRUARY 2011


**ANALYSIS OF FLUORIDE DISTRIBUTION IN SOIL AT THE
INSTALLATION POINTS OF REVERSE OSMOSIS
DRINKING WATER VENDING MACHINES**


PATCHARAPORN KHAOKHAJORN


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

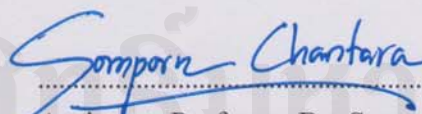
EXAMINING COMMITTEE

THESIS ADVISOR


..... CHAIRPERSON
Assistant Professor Dr. Yuthsak Vaneesorn


.....
Associate Professor Dr. Surasak Watanesk


..... MEMBER
Associate Professor Dr. Surasak Watanesk


..... MEMBER
Assistant Professor Dr. Somporn Chantara

ลิขสิทธิ์ © by Chiang Mai University
All rights reserved

24 February 2011

© Copyright by Chiang Mai University

ACKNOWLEDGEMENTS

I would like to express my heartfelt gratitude to my supervisor, Assoc. Prof. Dr. Surasak Watanesk at the Department of Chemistry, Faculty of Science, Chiang Mai University for his supervision, guidance, continual encouragement and assistance. I would like to thank Assoc. Prof. Dr. Ruangsri Watanesk, as well, for her helpful recommendations. Another thank would be given to Dr. Monton Kongpun, DDS of the International Center for Oral Health (ICOH), Chiang Mai for his guidance on sample collection and some chemicals provision.

I wish to express my thanks to “Center for Innovation in Chemistry: Postgraduate Education and Research Program in Chemistry Higher Education Development Project, Ministry of Education (PERCH-CIC)” for the partial support. I also thank the Graduate School and the Faculty of Science, Chiang Mai University for their partial funding to attend the 10th National Graduate Research Conferences for presenting part of my work.

I would like to express my deepest gratitude to my parents for their tender love, continuous care and encouragement.

Finally, I would like to thank those whose names are not listed here, who have one way or another contributed to the success of this work.

Patcharaporn Khaokhajorn