## A COMPARATIVE STUDY OF SPECTROPHOTOMETRIC FLUORIDE DETERMINATION METHODS FOR FABRICATING A SIMPLE FLUORIDE TEST KIT

#### PATCHARAPA JARUWAT

MASTER OF SCIENCE IN CHEMISTRY

### A COMPARATIVE STUDY OF SPECTROPHOTOMETRIC FLUORIDE DETERMINATION METHODS FOR FABRICATING A SIMPLE FLUORIDE TEST KIT

PATCHARAPA JARUWAT

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

MAY 2006 ISBN 974-9892-64-X

# A COMPARATIVE STUDY OF SPECTROPHOTOMETRIC FLUORIDE DETERMINATION METHODS FOR FABRICATING A SIMPLE FLUORIDE TEST KIT

PATCHARAPA JARUWAT

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

**EXAMINING COMMITTEE** 

CHAIRPERSON

ລິບສິກສິ້ມ Copyright ( AII ri

Associate Professor Dr. Surasak Watanesk

...... MEMBER

Associate Professor Dr. Ruangsri Watanesk

2 2ns np og 5 ..... MEMBER

Mrs. Sutheewan Sriupayo

9 May 2006

© Copyright by Chiang Mai University

#### ACKNOWLEDGEMENTS

The author would like to express her sincere thanks and appreciation to her thesis advisor, Assoc. Prof. Dr. Surasak Watanesk, for his kindness, invaluable guidance, grateful supervision, continual encouragement, and discussions.

The author would like to thank Assoc. Prof. Dr. Ruangsri Watanesk and Mrs. Sutheewan Sriupayo, as well, for their helpful discussion during the thesis examination.

The acknowledgement is also extended to the Postgraduate Education and Research Program in Chemistry (PERCH) for sponsoring the graduate scholarship and thank also to Department of Chemistry, Faculty of Science, Chiang Mai University for supporting the facility which enable this work to be carried out.

For those who have one way or other contributions to the success of this work especially the surface modification and colloids research group and other whose names are not listed here, please accept my sincere thanks.

Finally, the author would like to greatly thank and express her appreciation to her parents for their love, encouragement, inspiration, understanding and support.

> ht O by Chiang Mai Univers Patcharapa Jaruwat rights reserve