

## ACKNOWLEDGEMENTS

This thesis would not have been possible to finish without the kindness help, support, invaluable advice and guidance of my advisor, Assoc. Prof. Dr. Sirichai Kanlayanarat throughout my study at King Mongkut's University of Technology, Thonburi (KMUTT). I would like to thank to my co-advisor, Assoc. Prof. Dr. Varit Srilaong and Asst. Prof. Dr. Chalermchai Wongs-Aree, from Division of Postharvest Technology, School of Bioresources and Technology and Assoc. Prof. Dr. Thananya Wasusri, from the Department of Logistics Management, Graduate School of Management and Innovation, KMUTT for their kind helps and valuable suggestions.

I also would like to thank to the members of my dissertation committee, Dr. Anuwat Rattanachai from Postharvest and Processing Research and Development Office, Department of Agriculture, Ministry of Agriculture and Cooperatives for his advice and comments. My grateful appreciation goes to Prof. Dr. Antonio Acedo Jr., Head of the Department of Horticulture, Visayas State University, Leyte, Philippines for his advice and editing the manuscript.

I would like to thank a number of people for their help to complete all data, manuscript draft and related documents supports such as Mr. Thurdtawat Sopondilok, Mr. Manabutr Sriyong, Mr. Chaiyapoom Suksamran, Mr. Sapon Tangsawangthai, Miss Wichuda Somsuan as well as members and friends at Postharvest Technology Program, King Mongkut's University of Technology Thonburi. I also would like to thank all cabbage growers and officers at the Royal Project Foundation, Chiang Mai and cabbage growers and collectors at Phetchabun province as well as wholesalers and retailers at Srimummuang market, Bangkok for their kind support and help.

I am indebted to the Thailand Research Fund (TRF) for granting full financial support via Royal Golden Jubilee (RGJ) Scholarship and Postharvest Technology Program, King Mongkut's University of Technology Thonburi (KMUTT) for laboratory facilities.

Finally, I would like to extend my appreciation to my family for their encouragement and understanding especially my beloved father (Mr. Somphong Kramchote) and mother (Mrs. Sumalee Kramchote) for their supports unconditionally.