

**EFFECT OF PULPAL PRESSURE ON
ADHESIVES BOND STRENGTH
IN PRIMARY INCISORS**

TATSANA Saelim

**MASTER OF SCIENCE
IN DENTISTRY**

**THE GRADUATE SCHOOL
CHIANG MAI UNIVERSITY
AUGUST 2012**

ลิขสิทธิ์มหาวิทยาลัยเชียงใหม่
Copyright © by Chiang Mai University
All rights reserved

**EFFECT OF PULPAL PRESSURE ON
ADHESIVES BOND STRENGTH
IN PRIMARY INCISORS**

TATSANA SAELIM

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

**THE GRADUATE SCHOOL
CHIANG MAI UNIVERSITY**

AUGUST 2012

ลิขสิทธิ์มหาวิทยาลัยเชียงใหม่
Copyright © by Chiang Mai University
All rights reserved

**EFFECT OF PULPAL PRESSURE ON
ADHESIVES BOND STRENGTH
IN PRIMARY INCISORS**

TATSANA Saelim

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

EXAMINING COMMITTEE

S. Wanachantararak
.....CHAIRPERSON

Assoc. Prof. Dr. Sittichai Wanachantararak

N. Noppakun Vongsavan
.....MEMBER

Assoc. Prof. Dr. Noppakun Vongsavan

V. Varisara Sirimaharaj
.....MEMBER

Asst. Prof. Dr. Varisara Sirimaharaj

THESIS ADVISOR

V. Varisara Sirimaharaj
.....

Asst. Prof. Dr. Varisara Sirimaharaj

20 August 2012

© Copyright by Chiang Mai University

All rights reserved

ACKNOWLEDGEMENT

I would like to express my sincere gratitude to many persons whose generosity and helpfulness have contributed to this project.

I would like to extend my appreciation to Assistant Professor Doctor Varisara Sirimaharaj and Associate Professor Doctor Sittichai Wanachantararak, my advisors, invaluable guidance, advice and support during this project and other aspects of my Master's course.

I wish to thank Assistant Professor Chompoonuch Kunlertkij, Assistant Professor Jurairat Kunachaichote, Dr. Papimon Chompuinwai, Dr. Piranit Kantaputra, Dr. Ubonwan Teerapiboon, lecturers from Pediatric dentistry division, for their instruction and support through the course. And special thankful to Ms. Phirawan Chiranantraphorn for helping me in processing administration work smoothly.

I am thrilling in kindness of the patients and their parents who provided the teeth for the research. Without them this study would not have been possible. Many thanks to the staffs from dental departments in the hospitals and many private dental clinics in Chiang Mai Province who's collected the teeth for me. I wish to thank the dental assistant staffs from Pedodontics clinic for helping me in keeping the teeth.

I am grateful to Ms. Phenphichar Wanachantararak, Mr. Jakkol Simsuchin, Mr. Thanapat Sastraruji and Ms. Phannee Odthon for their help concerning Universal testing Machine and other apparatus. Many thanks to 3M Thailand Limited whose supplied materials. Thank the Institute of product quality and standardization, Maejo

University for favor the gold-palladium coater and the Scanning Electron Microscope and Mrs. Suchanya Kojinok for the help concerning scanning electron microscope. Many special thanks for the Department of Orthodontics and Pediatric Dentistry, Faculty of Dentistry, Chiang Mai University.

I would like to recognize The Graduate School, Chiang Mai University and Faculty of Dentistry, Chiang Mai University for supporting research grant for my research project.

I am thankful my beloved friends, Dr. Onnida Wattanarat, Dr. Porntipa Pipatpaitoon, Dr. Amornrat Suwannachai, Dr. Monticha Rangcharoen, Dr. Sathien Suravisankul, Dr. Darin Tachachonggintana, Dr. Sinee Chaowarat, Dr. Kamolthip Boonsongsawat, Dr. Achiraya Duanduan, Dr. Sariyaporn Chansri for being the consultants. And special thanks Mr. Nitiwit Korkoedtanawat for his encourages and understand me.

This thesis is dedicated to my parents, Mr. Kuisia Saelim and Mrs. Rattana Saegnow, and my brothers, Mr. Teerachai Saelim and Sapon Saelim for their warmness love, and encouragement in everything especially in doing the research work. Everybody makes me success in my research. Thank you very much.

Tatsana Saelim