

**SHEAR BOND STRENGTH OF DIFFERENT ADHESIVE SYSTEMS FOR
BONDING ORTHODONTIC BRACKETS TO PORCELAIN SURFACES**



RUANKEAW TEEPAGANONT

MASTER OF SCIENCE

IN ORTHODONTICS

ลิขสิทธิ์มหาวิทยาลัยเชียงใหม่

Copyright© by Chiang Mai University
All rights reserved

THE GRADUATE SCHOOL

CHIANG MAI UNIVERSITY

MARCH 2010

**SHEAR BOND STRENGTH OF DIFFERENT ADHESIVE SYSTEMS FOR
BONDING ORTHODONTIC BRACKETS TO PORCELAIN SURFACES**

RUANKEAW TEEPAGANONT

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

IN ORTHODONTICS

ลิขสิทธิ์มหาวิทยาลัยเชียงใหม่
Copyright© by Chiang Mai University
All rights reserved

THE GRADUATE SCHOOL

CHIANG MAI UNIVERSITY

MARCH 2010

**SHEAR BOND STRENGTH OF DIFFERENT ADHESIVE SYSTEMS FOR
BONDING ORTHODONTIC BRACKETS TO PORCELAIN SURFACES**

RUANKEAW TEEPAGANONT

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

EXAMINING COMMITTEE

Vachara Phetcharakupt

.....CHAIRPERSON

Assoc. Prof. Vachara Phetcharakupt

Virush Patanaporn

.....MEMBER

Assoc. Prof. Virush Patanaporn

D. Jotikasthira

.....MEMBER

Assoc. Prof. Dhirawat Jotikasthira

M. Chaiworawitkul

.....MEMBER

Assist. Prof. Marasri Chaiworawitkul

9 March 2010

© Copyright by Chiang Mai University

ACKNOWLEDGEMENTS

I would like to express my sincere thanks and appreciation to my advisor, Assoc. Prof. Virush Patanaporn for his precious suggestions and for supporting me to complete this thesis.

I wish to express gratitude to my co advisor Assist. Prof. Siripong Sirimongkolwattana for his professional guidance and help in improvement of this thesis.

My sincere appreciation is expressed to Faculty of Dentistry, Chiang Mai University for materials, equipments and financial support.

I would like to acknowledge The Graduate School, Chiang Mai University, for research grants.

I am greatly indebted to Hexa Ceram Co., Ltd for providing me the porcelain specimens used in this study and my friend, Chatchai Wongpruksasoong for providing me the test rings.

I would like to acknowledge the cooperation of Accord Corporation, J.E.B milenium, Thailand and Infinity dental care limited partnership for kindly supplying the materials used in this study.

I would also like to express thankfulness to Instructor Narumanas Korwanich, Family and Community Dentistry, Faculty of Dentistry, Chiang Mai University for his kind statistics advice in this research project and Instructor Thepparat Khemaleelakul, Restorative and Periodontology Dentistry, Faculty of Dentistry,

Chiang Mai University for his suggestions about the use of testing machine in this study.

I would like to thank Dr. M. Kevin O Carroll, Professor Emeritus of the University of Mississippi School of Dentistry, USA, and Faculty Consultant at Chiang Mai University Faculty of Dentistry, Thailand, for his assistance in the preparation of the manuscript.

My special thanks are also extended to all my friends and the staff of the Department of Orthodontics and Pediatric Dentistry, Faculty of Dentistry, Chiang Mai University, for their support and helpful suggestions.

Lastly, I am deeply grateful to everyone in my family, who always give love, support and encouragement. I would like to dedicate my thesis to my parents and my husband who have always supported me and inspired my life.

Ruankeaw Teepaganont