

CONTENTS

	Page
บทคัดย่อ	(3)
Abstract	(4)
Acknowledgement	(5)
Contents	(6)
List of Tables	(7)
List of Figures	(8)
Chapter	
1. Introduction	1
Statement of Problem	1
Review of Literatures	2
Objectives	18
2. Method of Study	19
Materials and Methods	19
Animal Experiment	23
Specimens Evaluation	30
Statistical Analysis	31
3. Results	34
4. Discussion	46
5. Conclusion	51

LIST OF TABLES

Table	Page
1. Biological Properties of Cortical and Cancellous Bone Graft	4
2. <i>In Vitro</i> Studies of Chitosan-Contained Biodegradable Scaffold	17
3. Graft Materials Randomly Selected to Test Animals	26
4. Mean OD Values, Average and Standard Deviation	41
5. Mean Bone Area%, Average and Standard Deviation	43

LIST OF FIGURES

Figure	Page
1. Structure of Chitin and Chitosan	8
2. Processing of Chitosan	9
3. Biodegradation of Chitosan	10
4. Cross-Linked Chitosan-Gelatin Solution after 24 Hours	21
5. Freeze-Dried Chamber	21
6. Freeze-Dried Chitosan-Gelatin Foam	22
7. Chitosan-Gelatin Sponge Disk in 8 mm-Diameter	22
8. The Rabbit with Intravenous Canular	24
9. The Rabbit with Oxygen Canular	24
10. Position of Rabbit	27
11. Exposure of Rabbit Parietal Bone	27
12. Four-Points Amalgam Landmark of Each Bony Defect	28
13. Autogenous Graft and CGS Graft in Place	28
14. Specimen after Sacrifice Procedure	29
15. Imaging Densitometer Unit	30
16. Leica Qwin Imaging Analysis Unit	32
17. Slide-Labeled Diagram	33
18. SEM of Chitosan-Gelatin Sponge	35
19. Gross Examination of Specimen	36
20. Radiograph of Specimen	37
21. Histologic Section of Autogenous Graft at Central Area (x5 Magnification)	38
22. Histologic Section of Autogenous Graft at Peripheral Area (x5 Magnification)	38

LIST OF FIGURES (CONTINUE)

Figure	Page
23. Histologic Section of CGS Graft at Central Area (x5 Magnification)	39
24. Histologic Section of CGS Graft at Peripheral Area (x5 Magnification)	39
Graph	
1. Mean OD Comparison Bar Chart	40
2. Mean Bone Area% Comparison Bar Chart	44