THE RELATION OF INTERALAR WIDTH TO INTERCANINE DISTANCE AMONG THE RACES OF MALAY, CHINESE AND INDIAN 168
Emma Rachmawati1, Nani Murniati1, Yong Jhia Ym1 168

THE EFFECTIVENESS OF WHITE CAMBODIA FLOWER EXTRACT (Plumeria alba L.) AS A DENTURE CLEANSER TO DECREASE THE NUMBER OF Candida Albicans IN SOFT LINER 153-160
Elizabeth Luna Kania Anindita, Lusi Hidayati, Achmad Gunadi 176

ANTIBACTERIAL EFFECT OF GAMBIER EXTRACT (Uncaria gambir (Roxb.)) TO BACTERIAL COLONIES IN MALE WISTAR STRAIN RATS 185
Rosada Sintya Dwi*, Siti Rusdiana Puspa Dewi*, Intan Ardita* 185

THE EFFECTIVENESS OF GAMBIER EXTRACT (Uncaria gambir (Roxb.)) AS AN ANTI-INFLAMMATORY AGENT IN WISTAR MALE RATS (Rattus norvegicus L.) 194
Ickman Seto, Siti Puspa Dewi, Ulfa Yasmin, Falensia Octaria 194

ANTIBACTERIAL ACTIVITY OF HIBISCUS ROSA-SINENSIS FLOWER EXTRACT AGAINST Fusobacterium nucleatum 201
Wahyu Dwi Putra*, Shanty Chairani*, Mellani Cindera Negara** 201

THE DIFFERENCE IN ANTI-BACTERIAL ACTIVITY BETWEEN BASIL LEAF (Occimum sanctum) ESSENTIAL OIL AND CHLORHEXIDINE GLUCONATE TOWARDS Enterococcus faecalis 209
Fajar Patriadi, Diani Prisinda, Arme Sukalati 209

EVALUATION OF ANTIFUNGAL ACTIVITY OF Stichopus hermanii ETHANOL EXTRACT AS ORAL CANDIDIASIS TREATMENT 214
Syamsulina Revianti* and Kristanti Parisihni* 214

THE EFFECT OF COMBINATION Stichopus hermanii AND HYPERBARIC OXYGEN ON OSTEOBLAST AND OSTEOCLAST IN PERIODONTAL TISSUE DIABETIC RAT 223
Dian Mulawarmanti 1, Kristanti Parisihni1, Yolfah Rizka Wedarti 195-202

DISTALIZATION OF UPPER MOLAR WITH REMOVABLE APPLIANCE
Deni Sumantri 231
The Difference In Anti-Bacterial Activity Between Basil Leaf (Occinum Sanctum) Essential Oil And Chlorhexidine Gluconate Towards Enterococcus Faecalis

Fajar Fatriadi, Diani Prisinda, Ame Suciat
Faculty of Dentistry, Universitas Padjadjaran, Bandung, Indonesia

Email: fajar.fatriadi@fkg.unpad.ac.id

Abstract

INTRODUCTION: Chlorhexidine gluconate is a commonly used irrigation agent for root canal treatments. However, it is ineffective towards Enterococcus faecalis because these bacteria possess the ability to enter deeper layer of tissue beyond dentinal tubules. The increase of bacterial resistancy towards synthetic agents has encouraged a few researches to investigate the anti-bacterial properties of herbs as irrigation agents for root canal, one of which is basil. Basil (Occinum sanctum), is a herbal plant with a characteristic aroma that is commonly used as an appetizer. It possesses anti-bacterial, anti-fungal and anti-viral properties. Essential oil obtained from basil possesses high levels of eugenol, which plays a major role in its anti-bacterial property. Basil essential oil is effective towards gram-positive and gram-negative bacteria. Objective: This research was carried out to investigate the presence anti-bacterial property in basil leaf essential oil compared to chlorhexidine gluconate towards the growth of Enterococcus faecalis ATCC 29212. Materials and methods: Initial procedures were to extract the essential oil from basil leaves through distillation. Results from phytochemical tests show that basil contains phenol, flavonoid, triterpenoid saponin, tannin with negative results on steroids. Bacterial tests in this research adapted the microdilution method by measuring Minimum Inhibitory Concentration (MIC) basil leaf essential oil towards Enterococcus faecalis ATCC 29212 compared to chlorhexidine gluconate. Result: Results from this research showed that the MIC value for basil leaf essential oil was 31.25 ppm while the value for chlorhexidine gluconate was 0.49 ppm. Discussion: Therefore, it can be concluded that essential oil from basil leaves possesses anti-bacterial effects but are lower than that of chlorhexidine gluconate towards Enterococcus faecalis ATCC 29212.

Keywords: Occinum sanctum, Anti-bacterial activity, Enterococcus faecalis

INTRODUCTION

The success of endodontic therapies highly depend on the eradication of infection-