EFEKTIFITAS PENYEMPROTAN EKSTRAK ETANOL DAUN KEMANGI 
(Ocimum basilicum L.) SEBAGAI DESINFECTAN TERHADAP KOLONI 
MIROORGANISME PADA BAHAN CETAK ALGINAT

(THE EFFECTIVENESS OF BASIL LEAVES (Ocimum basilicum L.) ETHANOL 
EXTRACT SPRAY AS DISINFECTANT FOR MICROORGANISM COLONIES 
ON ALGINATE IMPRESSION)

ABSTRACT

Background. Alginate is the impression material that most frequently used by 
dentists. This material has a high risk for contaminated by microorganism derived 
from saliva and blood that potentially could cause cross contamination. 
Disinfection is needed to reduce the contamination of microorganisms in the 
mold. One of the disinfectant liquid that can be used is basil leaves (Ocimum 
basilicum L.) ethanol extract that prove to have function as antimicrobial, 
antifungal, antiulcer, and antiseptic effects. Purpose. The purpose of this study is 
to find out the most effective concentration of the basil leaves ethanol extract as a 
disinfectant to decrease microorganism colony on the alginate impression.

Material and method. Twenty eight samples taken from seven respondents that 
fullfill the requirement. These alginate impression taken in first molar region and 
devided into 4 groups : group 1 sprayed by sterile aquades as a control, group 2 
sprayed by basil leaves ethanol extract 5% for 30 second, group 3 sprayed by 
basil leaves ethanol extract 10% for 30 second, group 4 sprayed by basil leaves 
ethanol extract 20% for 30 second. Then count the microorganism colony on the 
blood agar. Data analysis using the Kolmogorov Smirnov test, then using Levene 
Test. And the last using Kruskal Wallis and Mann Whitney test Result. There is 
significant differencies between each group, p = 0,00 (p<0,05). Conclusion. 
Basil leaves ethanol extract effective as a disinfectant to decrease the number of 
microorganisms on alginate impression material.

Keyword : Alginate impression, basil leaves, oral microorganism