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THE 3rd INTERNATIONAL CONFERENCE ON HEALTH SCIENCE 2016

"Optimizing the Mental Health under SDGs"

Poltekkes Kemenkes Yogyakarta

PROCEEDING BOOK

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THE 3rd INTERNATIONAL CONFERENCE
ON HEALTH SCIENCE 2016

“Optimizing theMental Health under SDGs”

INNA GARUDA HOTEL YOGYAKARTA, INDONESIA
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THE FORMULATION MODEL OF LIME PEEL EXTRACT AND PANDAN AS AN ANTIMICROBIAL TO DECREASE THE NUMBER OF AIR BACTERIA AT BADROOM

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ABSTRACT

Indoor air quality is a problem that needs attention because it will affect human health, especially the number of bacteria in bed room. One of the ways reducing the number of bacteria with Citrusaurantifolia extract and PandanusamaryllifoliusRoxb leaves formula. This study is a non Experiment with design randomized control group pre-test post-test. The subjects of this study consisted of a bedroom in RW 20 Baciro Yogyakarta totaling 14 bedrooms as an experimental group and a 7 bedroom as a group kontrol. Statistical analysis using onewayAnova followed by Post Hoc Test LSD. Test results of homogeneity of variances $p = 0.047$ means that there is no homogeneity in every variant, then followed by Kruskal Wallis test with a p-value 0.002 results which showed that there was a significant effect of exposure formula between the experimental group and the control group. Based on these results, we can conclude that there is the effect of the use with Citrus aurantifolia extract and PandanusamaryllifoliusRoxb leaves formula as an antimicrobial to the decrease in the number of air bacteria bedroom. Use of Formula 2 can reduce air bacteria up to 2,666 CFU/ m³.

Keywords : Citrus aurantifolia, PandanusamaryllifoliusRoxb, the number of bacteria

INTRODUCTION

Home health problems are quite complex, one of which is indoor air quality, is also an issue that needs attention because it will affect human health. Room air quality caused by several things, such as lack of ventilation or too wide ventilation, the source of contamination in room, outdoors or on building materials. According Kasdjono, 2011, that healthy house must qualify for adequate ventilation, cubicle dwelling density, as well as occupant behavior in home¹.

The results of the United State Environment Protection Agency (USEPA) that indoor pollution can be two until five times higher than outdoor pollution and one of the five major risk of pollution that threatens human health. According to Azwar, 1996 every gram of street dust containing approximately 50 million bacteria, whereas the dust in the room could contain 5 million bacteria. The high number of bacteria in indoor air is associated with potential disease acut respiratory infections (ISPA), pulmonary tuberculosis and Influenza².

Results of research Nugroho, 2010, stating there was a significant correlation between the levels of dust in the house with ISPA in infants in PuskesmasDlingo. Another study stated that the number of airborne bacteria will grow if the residents who suffer from diseases such as respiratory infections, (Joseph and Sulistryorini, 2005)³. Results of research bacteria in the air during the day in nursery Hospital Kuala Kapuas Soemarno known among A335-1050 CFU/m³ of air. This situation shows that the number of bacteria in the air is above the required standard is 700 CFU/m³of air (Bahri, 2010)⁴, as well as the results of research