ABSTRACT

Erna Sugiarti, NIM : 1534017, 2015. The differences number of Candida albicans colonies on Sabouraud Dextrose Agar (SDA) medium dissolved by distilled water and bottled-drinking water. Bachelor Thesis of DIV Medical Analysis Study Program, Faculty of Medical Science, Universitas Katolik Musi Charitas Palembang.

Background: To culture Candida albicans colonies, the most common culture medium is Sabouraud Dextrose Agar. According to the Ministry of Health Regulation, Number of 43, year of 2013, the most commonly-used solvent on microbiology medium is distilled water. However, the price of distilled water is relatively expensive and only a small amount of laboratory has a distillation equipment to produce distilled water. Therefore, this research tried to substitute the use of distilled water with bottled-drinking water as a solvent on microbiology medium.

Method: The research was categorized as a true experiment with Posttest Only Design. The specific Candida albicans which had fulfilled the inclusion and exclusion criteria were chosen as the sample. To investigate the effect of the solvent of colonies growth, Sabouraud Dextrose Agar was dissolved with distilled water and bottled-drinking water. After dissolving the culture medium, Candida albicans was growth on specific Sabouraud Dextrose Agar with spread plate method and incubated at 25°C for 48 hours. The growth-colonies was then calculated and parametrically analyzed using Paired t-test with 95% of confidence level.

Result: The result represented the number of Candida albicans colonies and the experimental research has been repeated for 16 times to prove the repeatable result. The results showed that the average numbers of colonies on Sabouraud Dextrose Agar dissolved by distilled water are 31,25, while the other culture medium dissolved by bottled-drinking water only 28,75 colonies on average. According to Paired Sample T-Test which shows p = 0,104 > 0,05, there is no significant effect of solvent on Candida albicans colonies growth.

Conclusion: The research proved that there is no significant different number of Candida albicans colonies growth on Sabouraud Dextrose Agar which is dissolved by distilled water and bottled-drinking water.

Keywords: Candida albicans, distilled water, bottled-drinking water