Garlic and Oyster Mushroom their synthesis potential against Salmonella typhi

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Abstract

The study was conducted to assess the antibacterial effect of the extract synthesis of garlic and oyster mushroom on Salmonella typhi and the best concentration of the aforementioned as to compare to a control variable, ciprofloxacin, on the same pathogen.

The study used experimental descriptive quantitative research. The agar diffusion test was used to experiment. In like manner, the researchers used the Completely Randomized Design (CRD) and Duncan's Multiple Range Test (DMRT) in the data analysis.

The study was conducted at the laboratory of the Biology Department of the College of Arts and Sciences, Benguet State University Main Campus, Km 6 La Trinidad, Benguet on October 17- 24, 2012.

Findings show that there is a significant difference on the effects of the different treatments on Salmonella typhi based on their respective zones of inhibition and there is a significant difference between the effects of the best concentration of garlic and oyster mushroom and the commercial antibiotic medicine on Salmonella typhi.

In conclusions, the heterogeneous treatments of garlic and oyster mushroom were identified to have antibacterial action on Salmonella typhi and the best concentration of garlic and oyster mushroom as compared to the control of Salmonella typhi is 75% garlic extract and 25% oyster mushroom extract with liquid volume equivalent to 18.75 ml garlic extract and 6.25 ml

oyster mushroom extract in 75% concentration or 7.5 ml in liquid volume in proportion diluted in 25% or 2.5 ml in liquid volume of distilled water.

From the data gathered, analysed and interpreted the following recommendations are presented: for future researchers to conduct a phytochemical analysis on the oyster mushroom to identify its antimicrobial chemical components and to consider using 100% concentrations of garlic and oyster mushroom; and for further studies to validate the findings of this research.

Conclusions:

From the data gathered, the following conclusions were drawn:

1. The heterogeneous treatments of garlic and oyster mushroom have an antibacterial action on Salmonella typhi.
2. The best concentration of garlic and oyster mushroom that has a significant effect on Salmonella typhi is 75% garlic extract and 25% oyster mushroom extract with liquid volume equivalent to 18.75 ml garlic extract and 6.25 ml oyster mushroom extract in 75% concentration or 7.5 ml in liquid volume in proportion diluted in 25% or 2.5 ml in liquid volume of distilled water.

Recommendations:

From the conclusions, the following recommendations are suggested:

1. For future researchers, to conduct a phytochemical analysis on the oyster mushroom to identify its antimicrobial chemical components.
2. For further research studies to be conducted to use 100% concentrations of garlic.
3. Further studies to be made to validate findings.

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