Effect of the Extract of the Leaves of the Rizophora mangle on the Growth of E. coli Bacteria

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The objective of this research was to determine the effect of red mangrove leaves extract on the growth of Escherichia coli bacteria. The Jobos Bay National Reserve of Estuary Investigations was visited once for this investigation and mangrove leaves were collected in this area. First, mangrove leaves were cut and placed 1 gram in three mortars. Then, a pinch of purified sand was added to 5mL of distilled water to facilitate the macerate process. Next, two samples of 1.75mL were poured in two microtubes from each of the three mortar, for a total of six microtubes samples. They were centrifuged for 10 minutes at 14,000 rpm. A conical flask containing the LB agar media was placed in the autoclave for sterilization. After, 100 µL of the bacteria was poured into each Petri dish containing the sterilized LB agar and two discs were placed on each Petri dish containing the extracts. Meanwhile, it was left in the incubator for a period of 24 to 48 hours; two replicas were made using the Kirby-Bauer technique. The data analysis indicated the measurement of the growth inhibition diameter. The control group was represented by two disc containing water. The experimental group was represented by two disc containing mangrove leaf extract. In addition, a graphic was made and photos were taken. In conclusion, the extract of red mangrove leaves did inhibit an average of 8 mm of the growth of bacteria. The hypothesis was accepted because the mangrove leaves contain substances with potential bacteriostatic properties.

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