International Journal of ChemTech Research
CODEN (USA): IJCRGG, ISSN: 0974-4290, ISSN(Online):2455-9555
Vol.13 No.01, pp 242-246, 2020

The Effect of Landscape Altitude on Antibacterial activities in Ethanolic Extract of Cocoa leaf (*Theobroma cacao*)

***Rasidah**

***Polythecnic of Health , Department of Pharmacy, Aceh, Indonesia**

Abstract : Cocoa is one of the leading plantation commodities in Indonesia. The part of cocoa trees that can be found in abundance is the leaf. The leaves cut out of cocoa trees are utilized by some farmers in composting, when in fact cocoa leaves have a great potential to be processed into health care products. The present study aims to determine the effect of high altitude landscape on antibacterial activities in ethanolic extract of cocoa leaves (*Theobroma cacao*, L). For the experiment, we employed a Completely Randomized Design (CRD) that is divided into 3 treatments—Aqua Dest (Control), ethanolic extract of high-altitude cocoa leaves (P1), and ethanolic extract of low-altitude cocoa leaves (P2)—repeated 5 times. The results show that the largest resistance zones of *Eschericia coli* and *staphylococcus aureus* are created by ethanolic extract of high-altitude cocoa leaves with the size of 19.96 mm and 20.52 mm, respectively. Our ANOVA test shows that extracts of both high- and low-altitude cocoa leaves have an effect on the growth of *S.aureus* (P = 0,000) and *E. coli* (P = 0,000) bacteria. From Duncan's test we can conclude that ethanolic extract of high-altitude cocoa leaves differs significantly (P<0.05) from its lower altitude counterpart in inhibiting the growth of *E.coli* and *S.aureus* bacteria.

Keywords : cocoa leaf, *Theobroma cacao*, highlands, lowlands, antibacterial.

Rasidah /International Journal of ChemTech Research, 2020,13(1): 242.246.

DOI= http://dx.doi.org/10.20902/IJCTR.2019.130130

*****