

TITLE: ANTIBACTERIAL ACTIVITY OF *Cymbopogon citratus* EXTRACT FRONT BACTERIA *Escherichia coli* ATCC 25922

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ABSTRACT:

Among the typical plants of the ecotone region, we can find *Cymbopogon citratus*, popularly known as lemongrass. It is an herbaceous plant of the Poaceae family and according to ethnopharmacological knowledge it has antimicrobial and soothing diuretic functions. For the production of the vegetal extract the collected leaves were washed with running water, dried, and then taken to the greenhouse (40°C for 24 hours), so that they were dried and stabilized for later production of the extract, then it was carried out the pre-production of the plant extract, where the samples were crushed and numbed in alcohol at 70%, and stayed for 10 days, and then passed through percolation. In the UNITPAC microbiology laboratory, Mueller Hinton Agar culture medium was prepared and disk diffusion tests were performed using *Escherichia coli* ATCC 25922 strains, which were tested against the antibiotics: vancomycin, ampicillin, azithromycin and *Cymbopogon citratus* extract, with the extract not showing significant inhibition compared to the abiotics used in the test. Among the antibiotics in analysis, the most inhibited was azithromycin, whereas the extract of *Cymbopogon citratus* did not obtain significant inhibition compared to the antibiotics under test, thus demonstrating a bacterial resistance to the extract or an insensitivity by the bacteria to the active principles contained in the test extract. Corroborating the results of Alvarenga et al. (2007), in which the effect of aqueous and ethanolic extracts of lemongrass were ineffective on bacteria. Although the results were not positive for the microbial inhibition of Gram-negative bacteria under analysis, these tests become very important, since microbial resistance mechanisms are increasingly complex and require new substances and drugs to be eradicated and thus offer a better solution for contamination and diseases of microbial origin.

Keywords: Antibiotic, *Cymbopogon citratus*, Ecotone

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