

Title: Inhibitory activity of the essential oil of *Lippia alba* (Mill.) N.E.Br. ex Britton & P. Wilson (Verbenaceae), variety of camphor and 1,8 cineole, on the growth of dermatophyte *Trichophyton rubrum*.

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Infectious diseases are configured as a serious public health problem, linked to the occurrence of fungal and bacterial resistance phenomena, which in recent years has increased, leading to a rapid and extensive search for new drugs to treat these infections. This study aimed to investigate the antifungal effect of the *Lippia alba* essential oil and against *T. rubrum* strains. Aerial parts of *L. alba*, popularly known as lemon balm and melissa, was collected and the essential oil was submitted to hydrodistillation for 4 h in a modified Clevenger-type apparatus, followed by chemical analysis by gas chromatography / mass spectrometry. A total of 2 strains of *T. rubrum*, were included in this study. The broth microdilution method was performed and the results were expressed as the minimum inhibitory concentration (MIC) and minimum fungicidal concentration (MFC). The volatile oil extracted from *L. alba* ranged from yellow to red, whose extraction yield was about 1.24. The main constituents were Camphor (31.76%), 1,8-Cineole (18.67%), α -Pinene (14.41%) and β -Caryophyllene (7.70%). A total of 97.41 % of the chemical composition was identified. In the broth microdilution assay, the essential oil inhibited the growth of dermatophytes, whose MIC values was 0.62 mg/mL and MFC values was 1.25 mg/mL for all tested strains of *T. rubrum*. These results obtained showed a capacity of antifungal activity of *L. alba* essential oil, on the growth inhibition of dermatophytes, whose chemical composition showed that this oil is a variety of camphor and 1,8 cineol. Further studies should be developed testing the essential oil against other pathogens microorganisms, as well as research into other biological activity and possible mechanism of action.

Keywords: aromatic plant, dermatophytes, essential oil, antifungal effect.