

**TITLE:** ANTIFUNGAL ACTIVITY OF THE CINNAMON (*CINNAMOMUM ZEYLANICUM*) ESSENTIAL OIL ON *CANDIDA ALBICANS*

**AUTHORS:** SILVA, B.G.M.; PIEROZAN, E.A.; BARBOSA, R.L.C.; SALMÓRIA, L.A.; LARA, L.; BORTOLUZZI, N.; SOUSA, A.J.; BONAPAZ, R.S.; FORNARI, G.; MAZURECHEN, S.R.

**INSTITUTION:** CAMPO REAL UNIVERSITY CENTRE, GUARAPUAVA, PR (COMENDADOR NORBERTO STREET, 1299, SANTA CRUZ, CEP: 85015-240, GUARAPUAVA - PR, BRAZIL)

**ABSTRACT:**

The toxicity of antifungal agents currently available and the development of resistance mechanisms of potentially pathogenic fungi incite research by natural alternative medicine compounds that have therapeutic properties. The use of herbal medicines is interesting due to the availability of the market and the low cost. Cinnamon (*Cinnamomum zeylanicum*) is known worldwide for its culinary and aromatic properties. The essential oil extracted from the branches and leaves is rich in cinnamic aldehyde, active principle with antimicrobial properties already described in the literature. The objective of this study was to evaluate the susceptibility of *Candida albicans* ATCC 90028 (sample from the Mycology Laboratory of the University of Center-West - UNICENTRO) isolated from true *Amazona aestiva* parrot, compared to the essential oil of *C. zeylanicum*. Five commercial brands of cinnamon essential oil were tested and tested at concentrations ranging from 1, 10, 25, 50 and 100%. The technique used was disk-diffusion in agar, according to the methodology described by the National Committee for Clinical Laboratory Standards. The determination of the oil inhibition potential was evaluated by the size of the halos formed, obtained in two steps, after 24 hours and 48 hours of incubation. For the positive control, sterile disc impregnated with a dilution of Fluconazole at the final concentration of 25 µg was used. For the negative control, a disc impregnated with 10µL of absolute metyl alcohol was assigned. The essential oil brands of *Cinnamomum zeylanicum* tested had an inhibitory action on the growth of *C. albicans* even at low concentrations. Three brands completely inhibited the development of yeast at concentrations of 10, 25, 50 and 100%. At the 1% concentration, only one label showed no fungal inhibition. The results obtained in this research demonstrate that there was an efficient inhibition of *Candida albicans* ATCC 90028 at the concentrations of 10, 25, 50 and 100%. The use of *Cinnamomum zeylanicum* essential oil at these concentrations may be useful as a synergistic alternative therapy for treatment of *Candida albicans* infections in birds.

**Keywords:** alternative medicine, antifungal, cinnamon, herbal medicines, medicinal plants