# **Titre d’article**: *In vitro assessment of antifungal and antistaphylococcal activities of Cinnamomum aromaticum essential oil against subclinical mastitis pathogens*

**Abstract :**

The objective of this study was to assess the in vitro antibacterial and antifungal activities of Cinnamomum aromaticum essential oil against bacteria and yeasts isolated from the cows with subclinical mastitis. The broth microdilution method was employed to determine the antibacterial and the antifungal activities against 7 yeasts (Candida albicans, Candida lambica, Candida tropicalis, Candida zeylanoides, Cryptococcus albidus, Cryptococcus laurentii and Rhodotorula glutinis) and 10 Staphylococcus spp. strains (Staphylococcus aureus, Staphylococcus chromogenes and Staphylococcus xylosus) with different antibiotic resistance profile isolated from the cows with subclinical mastitis. The results showed that the tested essential oil exhibited a satisfactory antimicrobial activity against all tested bacteria with minimum inhibitory concentration value in the concentration of 0.625 μl/ml, and against all tested fungi in the concentration range of 0.625 μl/ml to 2.5 μl/ml. The minimum bactericidal concentration values ranged between 2.5 μl/ml and 10 μl/ml, and minimum fungicidal concentration values were in the range of concentration from 2.5 μl/ml to 10 μl/ml. This study revealed that Cinnamomum aromaticum essential oil exhibited strong antibacterial and antifungal activities, and it may be indicated as an alternative solution to minimize the risk of fungal mastitis, especially for the treatment of subclinical staphylococcal mastitis during lactation and the dry-off period.