

# **Comparison of carotenoids extracted from carrots, corn and tomatoes on Staphylococcus aureus isolated from secretions of infected wounds with common antibiotics and process optimization**

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The study is conducted to analyze the carotenoid antibacterial activity of carrot, corn, and tomato. The study compared the effectiveness of the plant sample methanolic, ethanolic and DMSO extracts in 60 °C for 24, 48 and 72 hours against gram positive bacteria such as Staphylococcus Aureus. Corn, carrot and tomato extracts exhibited antibacterial property against Staphylococcus aureus. The mean zone of inhibition of tomato, corn and carrot extract was 4, 1, 1 mm respectively and was found to be significantly higher among the treatments but lower than the positive control, Chloramphenicol, with 9 mm. The MIC of extracts for tomato, corn and carrot was  $125 \times 10^2$ ,  $25 \times 10^3$  and  $5 \times 10^4$  µg/ml, respectively. Thus, the use of tomato extract can inhibit food spoilage caused by S. aureus and can be used for treatment of S. aureus infection.

**Keywords :** Staphylococcus aureus - tomatoes - bacteria

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