

## Antimicrobial Efficacy of TN Kalka against Laboratory Specimen of *Staphylococcus aureus*

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TN kalka consisted with three ingredients including dried leaves of *Azadirachta indica*, dried seeds of *Sesamum indicum* and Bees' honey which is clinically use for disinfect wounds. The current study was designed as a microbiological assay and the key objective was to evaluate the antibacterial efficacy of TN kalka against laboratory specimen of *Staphylococcus aureus* (ATCC25923). The Anti-Bacterial Sensitivity Test was conducted according to the Kirby Bauer method using Agar Well Diffusion method by comparing the effect of Amoxicillin as the positive controller and distilled water as the negative controller in triplicates. The testing drug was assessed as D1 and D2 in 1:2 concentration ratios respectively. Results of the study were obtained through the diameter measurement of inhibitory zone and assessed using one - sample T – test. D1 depicted p value as 0.024 and T – test was 4.44. D2 depicted p value as 0.100 and T- test was 1.89. Comparing to the positive control drug the hypothesis was generated as  $H_0: \mu \leq 19$  mm and  $H_1: \mu > 19$  mm. Referring to hypothesis,  $H_0$  of D1 was rejected and  $H_0$  of D2 was not rejected. The significant level was considered less than 5%. D2 concentration of TN kalka was significant against laboratory specimen of *Staphylococcus aureus*. The study suggests that the TN kalka is consisted with an extrinsic effective antibacterial application for infected wounds which were caused by *Staphylococcus aureus*. Further clinical study on human subjects will verify the efficacy of TN kalka in clinical manifestations.

**Key Words:** Antibacterial Activity, *Staphylococcus aureus*, TN kalka, Kirby Bauer method