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Isolate, Characterization and Optimization of Soil Sample and Mobile Sample and Also Test the Antimicrobial Activity of that Sample

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Abstract: *In this study, soil bacteria were isolated and characterized including its antimicrobial Activity. For this, soil samples were collected from Environment. Soil samples were diluted and cultured in nutrient agar plates to obtain the isolated bacterial colonies. Antimicrobial activity producers were screened by stab overlay, agar well diffusion, cross streak plate, pour plate & spread plate methods. The strain isolates with significant antimicrobial activity producing potential, which inhibited the growth of sensitive strains in all applied assays have been identified as S. aureus. Maximum antimicrobial activity of the isolated strain was observed at pH 7, 24 hrs& incubation at ± 37 ˚C. Under optimized growth conditions, inhibitory zone was 18-14. 5 mm. These antimicrobial activity lost antibacterial activity after treating with Cefuroxime & Methanolic Extract. Antimicrobial activity obtained from producer strain was active agaist Staphylococcus aureus, E. coli. A total of 91 mobile phones belonging to staff members in Taif University screened for bacterial isolates using bacteriological methods. Bacteriological analysis revealed that about (85.1 %) of mobile phone samples were contaminated with bacteria. Some bacterial species were isolated from mobile phone samples. They identified as Staphylococcus and Bacillus spp. Genetic diversity of these bacteria was investigated by Random Amplified Polymorphic DNA (RAPD) analysis. The fingerprinting patterns revealed two main clusters of strains with a similarity level of approximately 55.8%.*

Keywords: Staphylococcus Aureus,,E.Coil, Antimicrobial Activity, Zone of inhibitions, Growth Curve of Bacteria. Gram staining, sterilization

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