

Effects of modified hydrothermal nanotitania on the viability of Staphylococcus aureus

ABSTRACT

Staphylococcus aureus (*S. aureus*) is an important bacterium with significant pathological implications in the field of medicine. Attempting to cure bacterial infections at an advanced stage results in considerable waste of time, effort and expenditure. Thus, the prevention of such illnesses is paramount. Besides using chemical drugs to treat infections, several non-organic extracts have been tested in trials and been shown to impede the bacteria's growth. This paper proposes that the modified hydrothermal nanotitania extract has great potential to combat this lethal organism. The viability of *S. aureus* was shown to be markedly reduced following the addition of nanotitania extract with 0.01%, 0.03% and 0.05% silver after 24, 48, and 72 hours. The ability of the nanotitania extract to inhibit the growth of *S. aureus* indicates its antimicrobial characteristics.