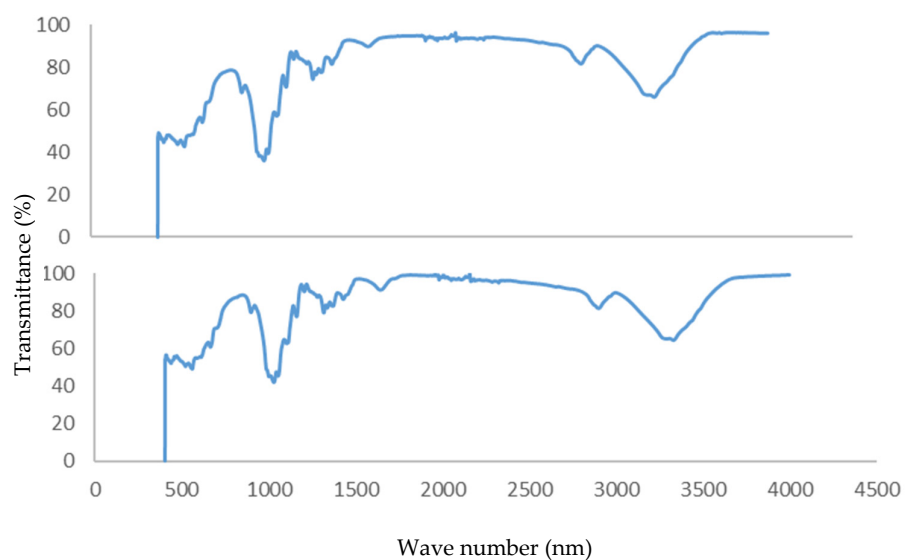


## Supplementary



**Figure S1.** Fourier-Transform Infrared spectra of (A) Mercerized cotton fabric without AgNP treatment (B) AgNP treated mercerized cotton fabric.

**Table S1.** Zeta-Potential of Mercerized and un-mercerized cotton fabric.

SAMPLE	ZETA POTENTIAL (mV)
Without Mercerization	-35.27
Mercerization	-60.9

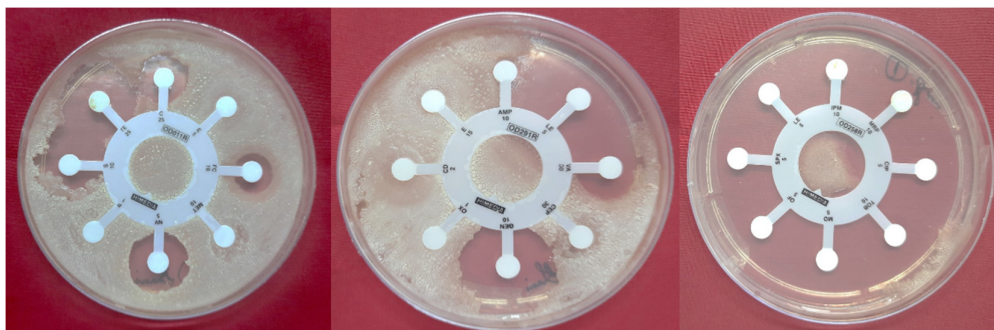


Figure S2: Antibiotic disc diffusion assay against *B. licheniformis*.

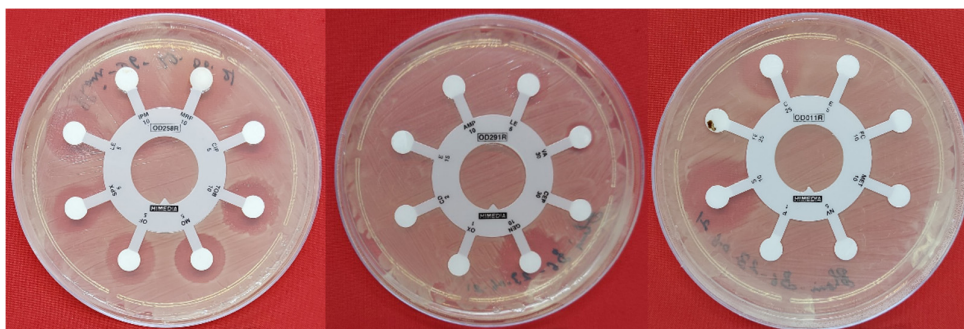
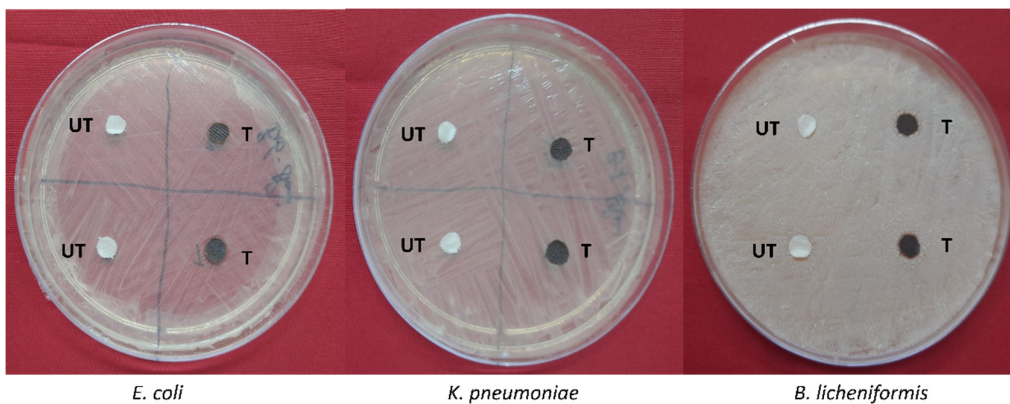


Figure S3: Antibiotic disc diffusion assay against *E. coli*.



Figure S4: Antibiotic disc diffusion assay against *K. pneumoniae*.

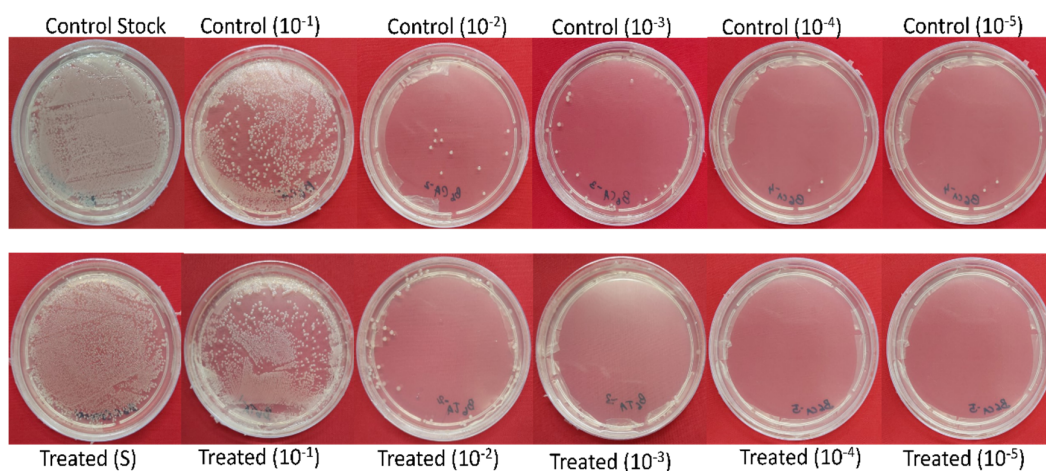


*E. coli*

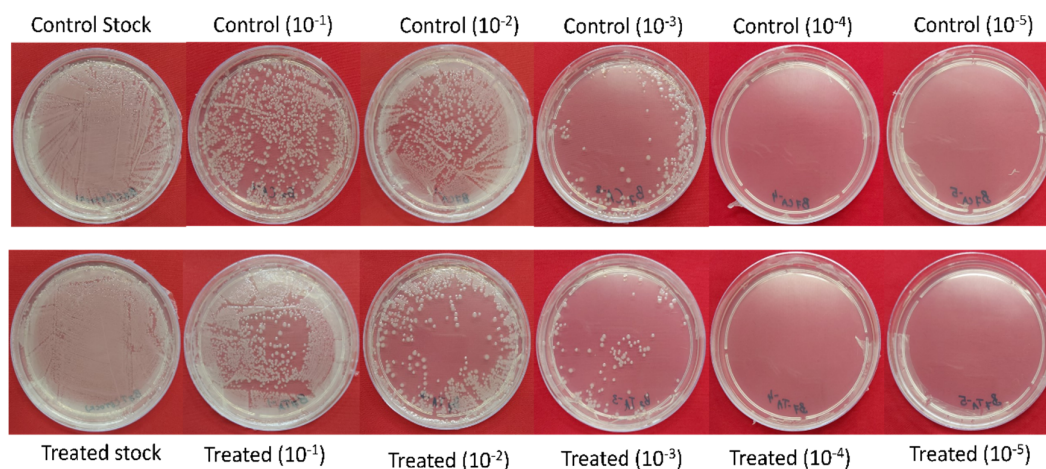
*K. pneumoniae*

*B. licheniformis*

Figure S5: Disc diffusion assay of the fabric (control and AgNP treated) against the three test bacteria.

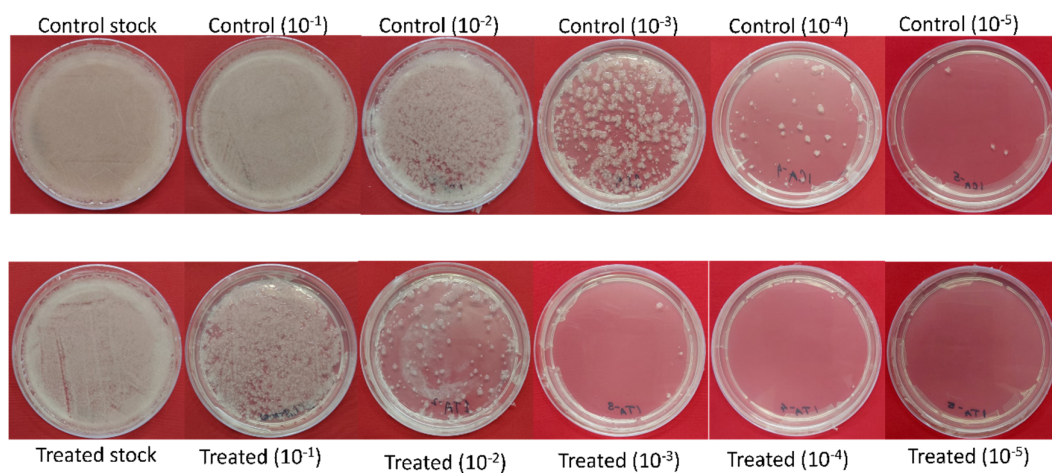


**Figure S6. The number of *E. coli* colonies formed (CFU mL<sup>-1</sup>) were counted after exposing to both treated and untreated fabric.**



**Figure S7. The number of *K. pneumoniae* colonies formed (CFU mL<sup>-1</sup>) were counted after exposing to both treated and untreated fabric.**





**Figure S8. The number of *B. licheniformis* colonies formed (CFU mL<sup>-1</sup>) were counted after exposing to both treated and untreated fabric.**