

Supplementary Information

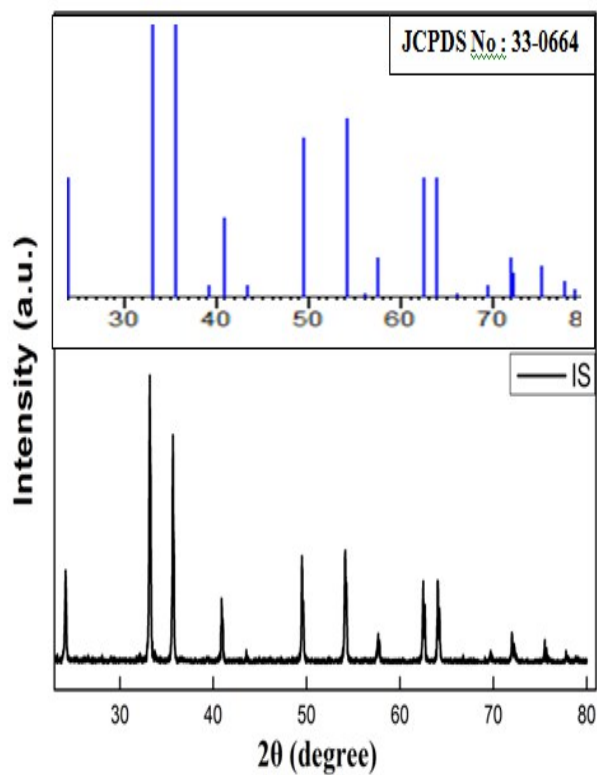


Fig. 1. XRD patterns for sample IS and the JCPDS data for $\alpha\text{-Fe}_2\text{O}_3$.

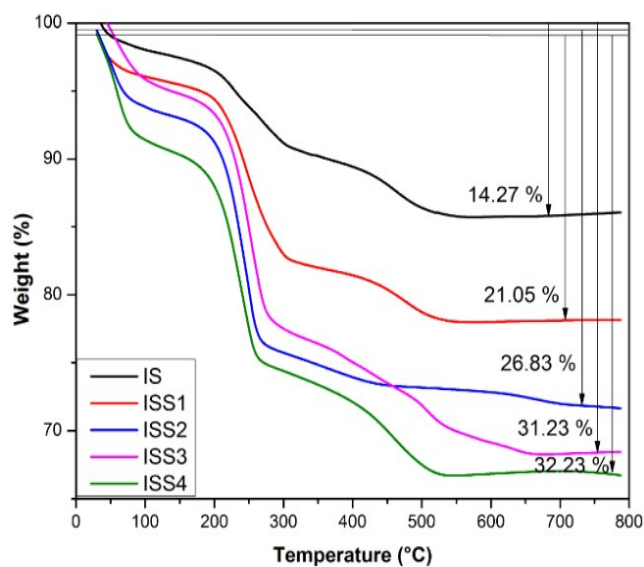


Fig. 2. TGA curve for all the samples.

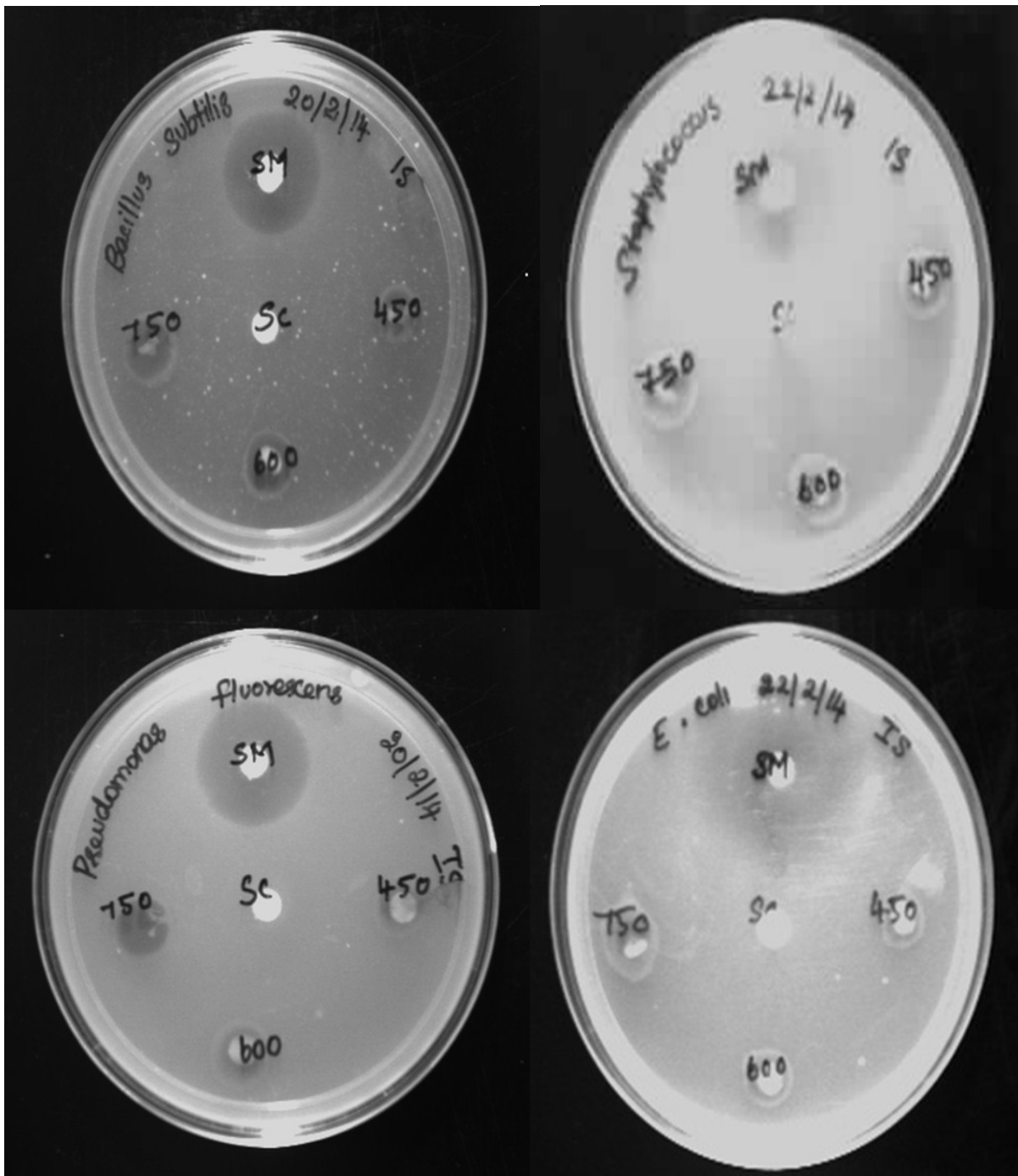


Fig. 8E: Zone inhibition of sample IS against bacteria *B. subtilis*, *S. aureus*, *P. fluorescens* and *E. coli*.

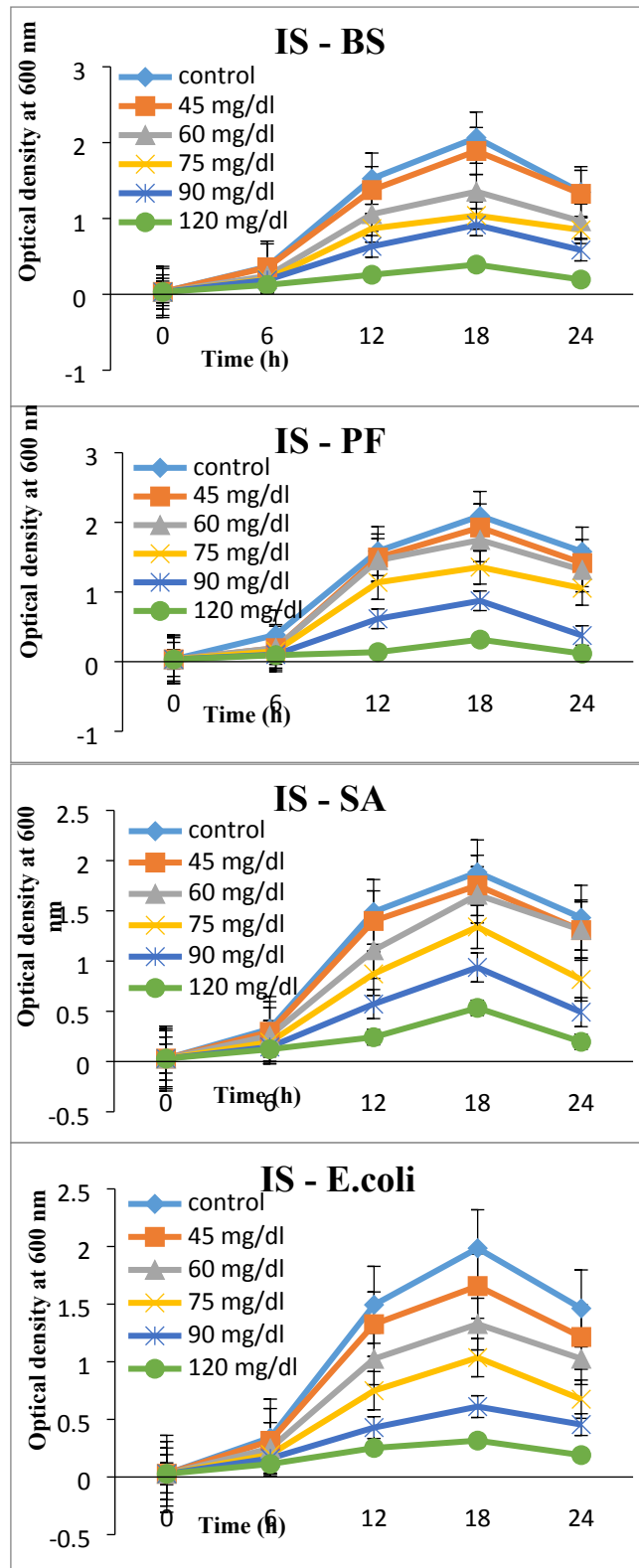


Fig. 9E: Growth curves of bacteria *B. subtilis* (BS), *P. fluorescens* (PF), *S. aureus* (SA) and *E. coli* for the sample IS.