

Table S1. Yield table of carboxymethyl chitosan (CMC)

Amount of chitosan (gram)	Yield (gram)	Percentage yield (%)
2	1.6±0.3	83.7±15.5
4	3.7±0.2	93.4±6.4
6	5.8±0.1	96.6±2.1
8	6.7±0.5	84.4±6.3
12	10.6±0.6	89.0±5.0

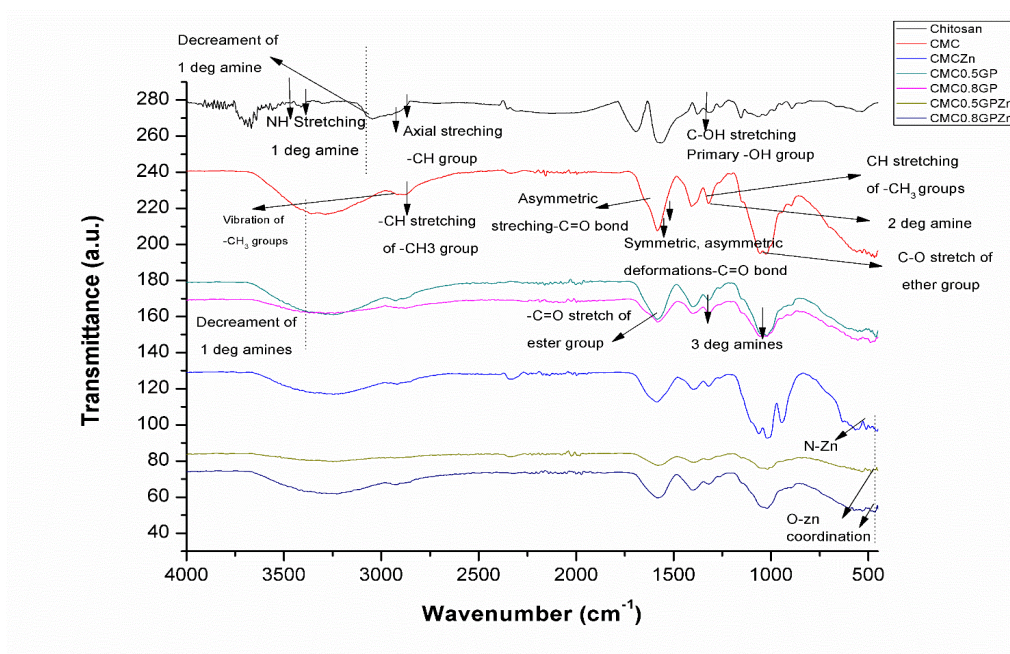


Figure S1. Fourier infrared spectroscopy (FT-IR) for all variables of scaffolds.

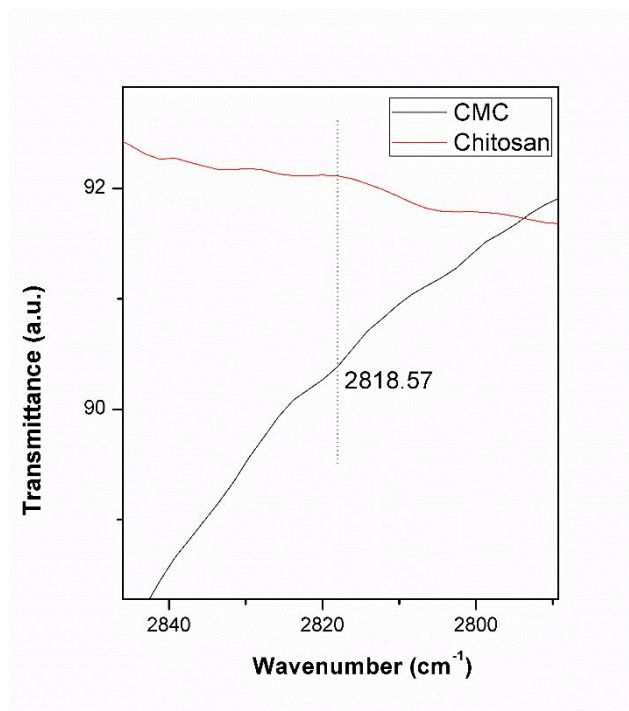


Figure. S2a Shows a zoomed image for methoxy peak seen in CMC due to C-H stretching of methyl groups attached to an ether residue.

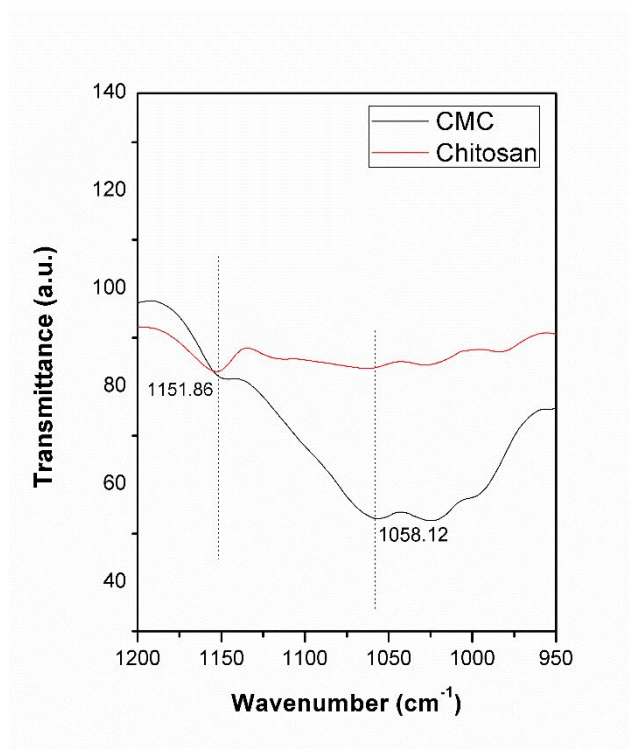


Figure S2b Shows a zoomed image for C-O stretch due to alkyl substituted ether and cyclic ether indicating the formation of O-substitution reaction.

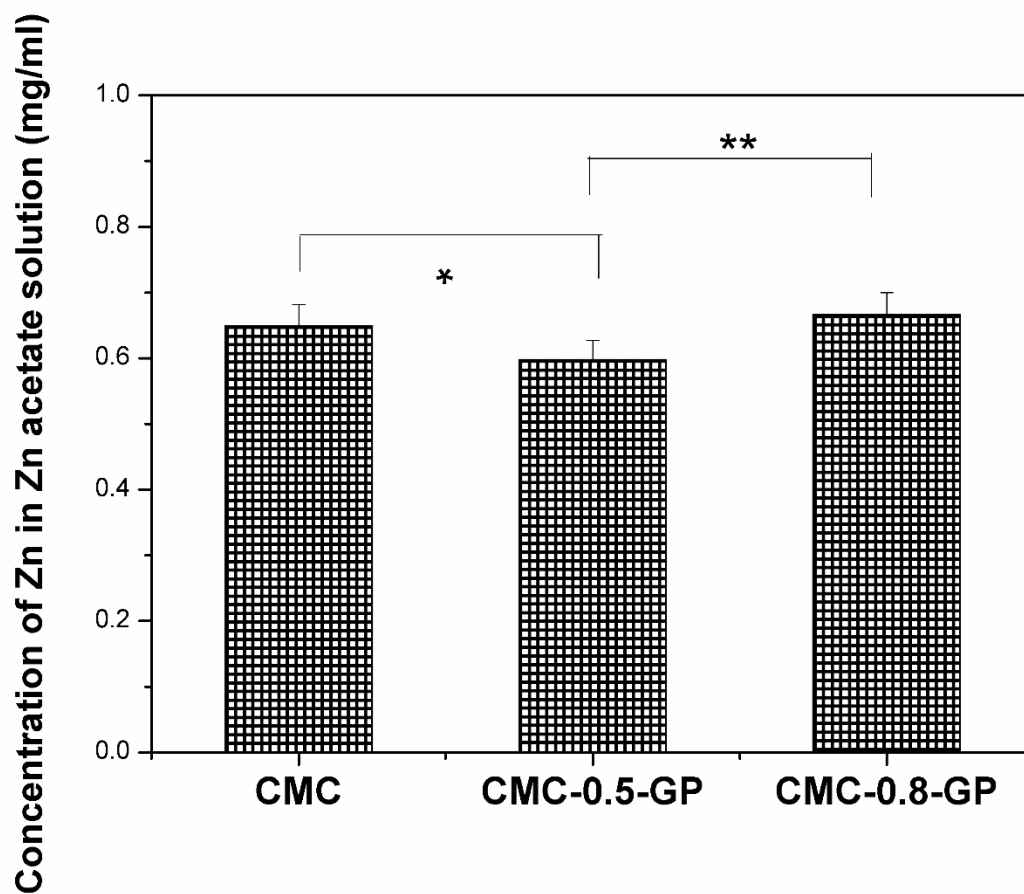


Figure S3. Represents AAS data for the amount of zinc left unconjugated in the solution. In both graphs, * shows $p < 0.05$ and ** for $p < 0.005$.

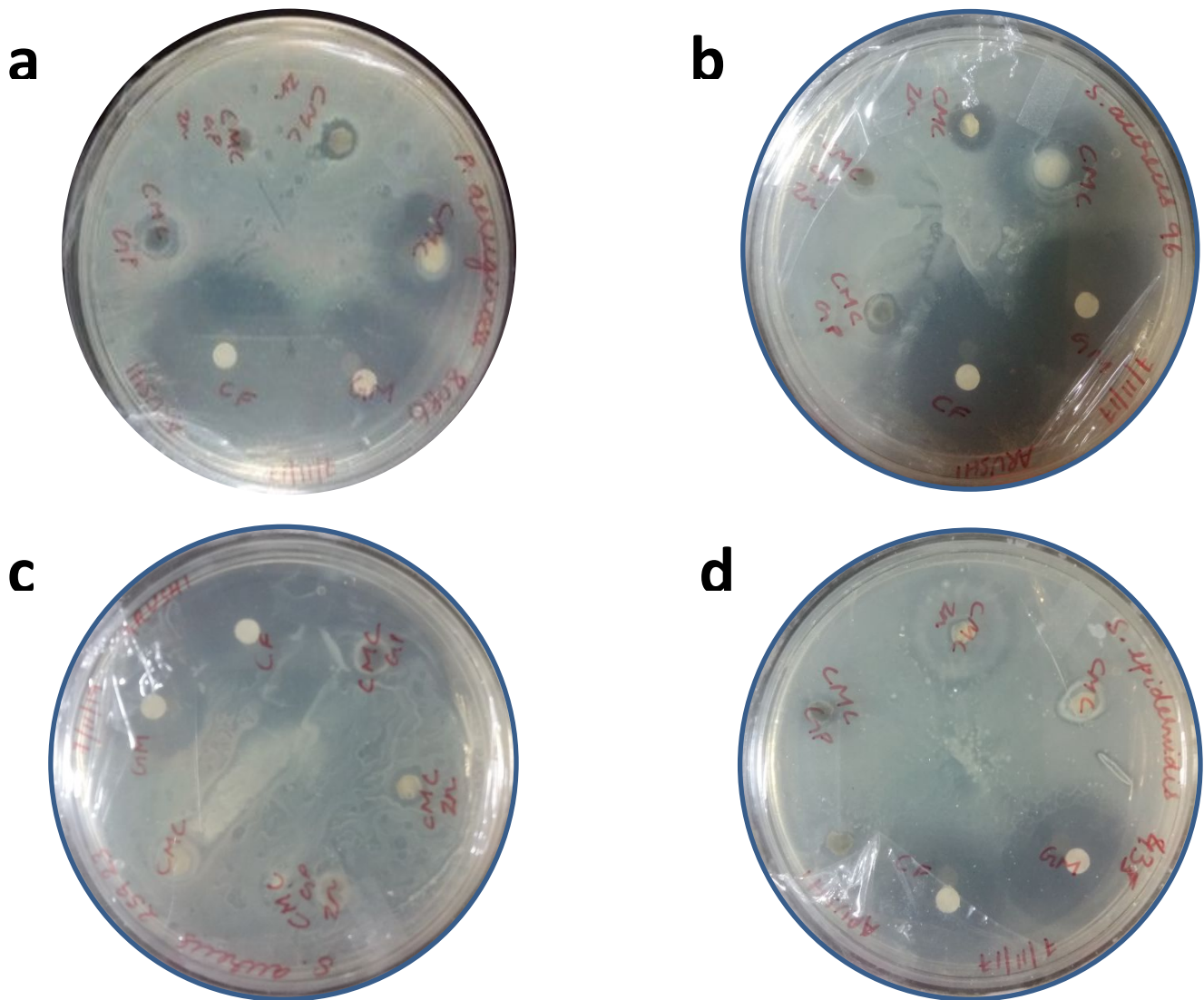


Figure S4. Collage shows the zone of inhibition for a) *P.aeruginosa* 8086 – strong biofilm forming b) *S.aureus* 96 – strong biofilm forming c) *S.aureus* 25923 – Non biofilm forming d) *S.epidermidis* 435 – Strong biofilm forming bacterial strains. The scaffolds did not show a significant zone of inhibition in comparison to the antibiotics- cefotaxime and gentamicin.