## Supporting information

We have compared the different antibacterial properties between the CS/CMC polyelectrolyte multilayer coating which assembled on glass side and the glass slide in the early stage. However, because the CS/CMC polyelectrolyte multilayer coating only produced antibacterial effects on the part be covered by it, and did not produce a significant inhibition zone. Compared with the glass slide, the antibacterial effect of the CS/CMC polyelectrolyte multilayer coating is not obvious, the preliminary experimental results are shown in figure S1. So we chose to grind the CS/CMC polyelectrolyte multilayer coating into a powder and then disperse it in a bacterial effect.

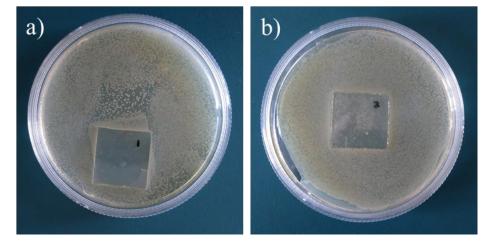


Figure S1. The preliminary antimicrobial test results of (a) CS/CMC polyelectrolyte multilayer coating and (b) glass slide.