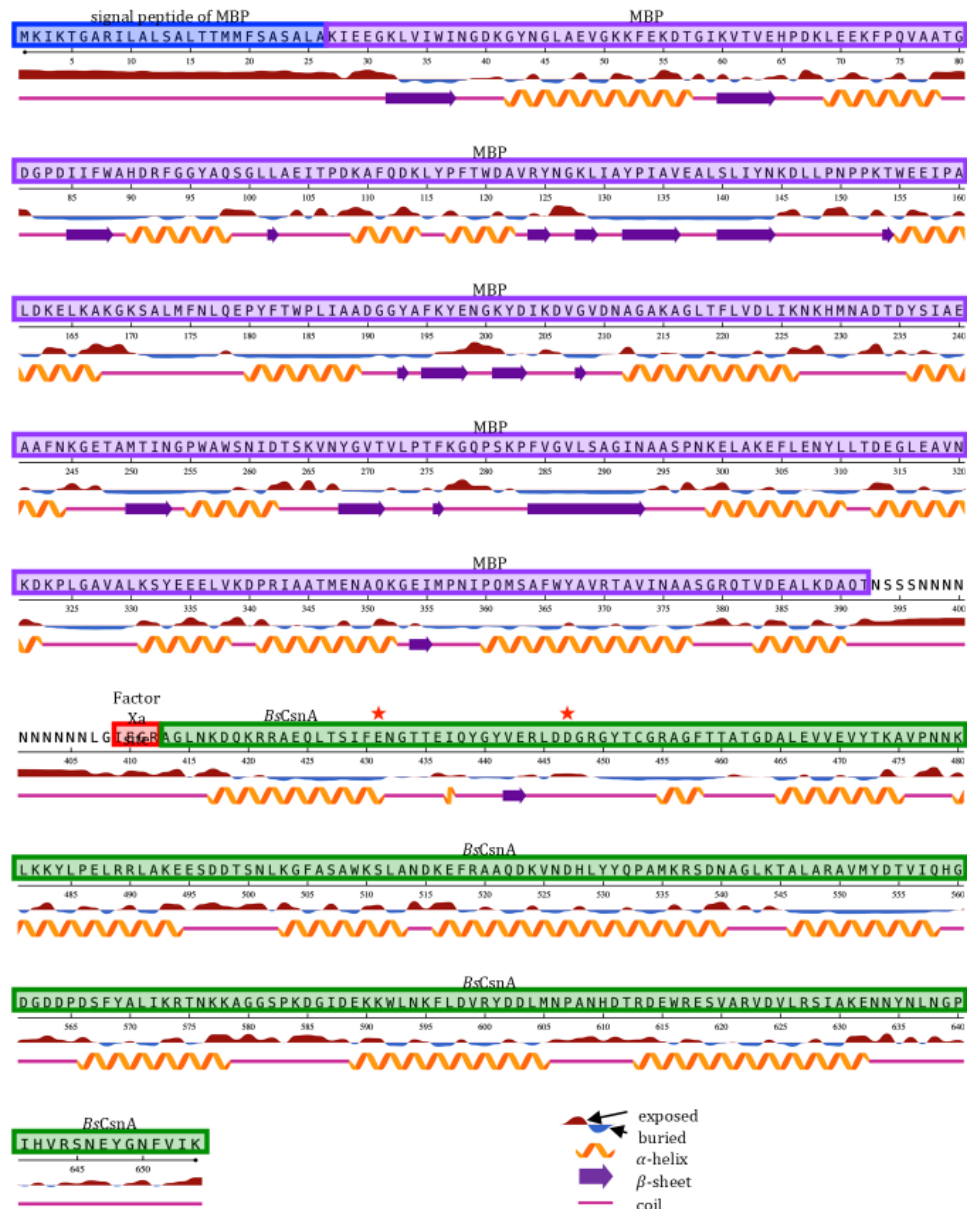


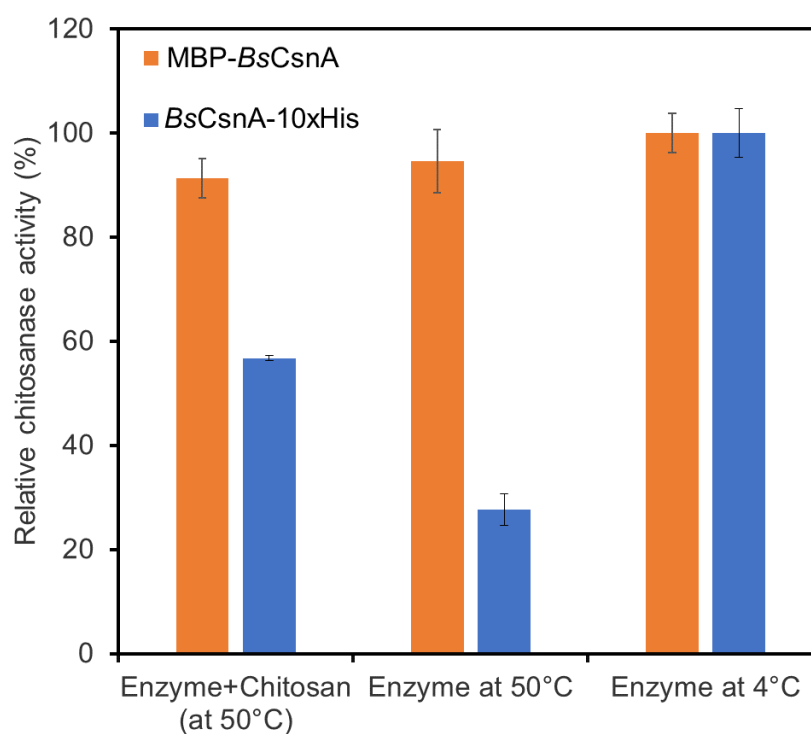
## APPENDIX

## APPENDIX



**Figure X.** A graphical representation of MBP-BsCsnA showing relative surface availability (red is exposed and blue is buried) and the secondary structures ( $\alpha$ -helix,  $\beta$ -sheet and coil). The signal peptide of MBP (blue), MBP (purple), Factor Xa site

(red) and *BsCsnA* (green) were labelled accordingly. The two catalytic residues of *BsCsnA* (Glu<sup>431</sup> and Asp<sup>447</sup>) were marked by red stars. of The recombinant MBP-*BsCsnA* is made up of 654 residues and is about 72.5 kDa of size.



**Figure X.** The thermostability of MBP-*BsCsnA* (orange bar) and *BsCsnA*-10xHistidine (blue bar) at 50°C in the presence or absence of 0.5% low molecular weight chitosan for 30 min was compared to the activity at storage temperature (4°C). Each bar represented the average of triplicates from two independent experiments and the error bars represented the ratio standard deviation of the mean.

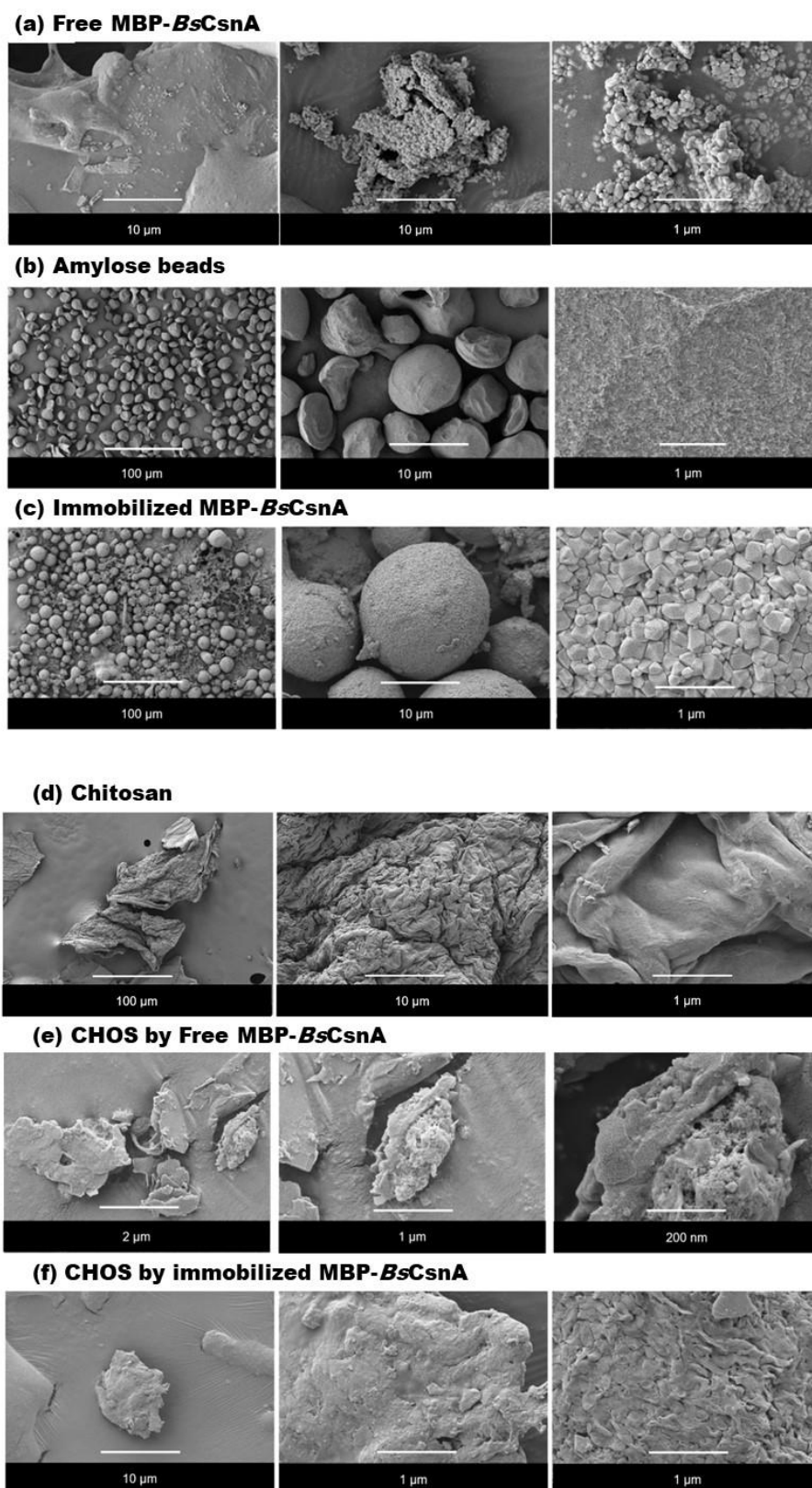


Figure X. FE-SEM analyses of amylose beads before and after immobilized enzyme.