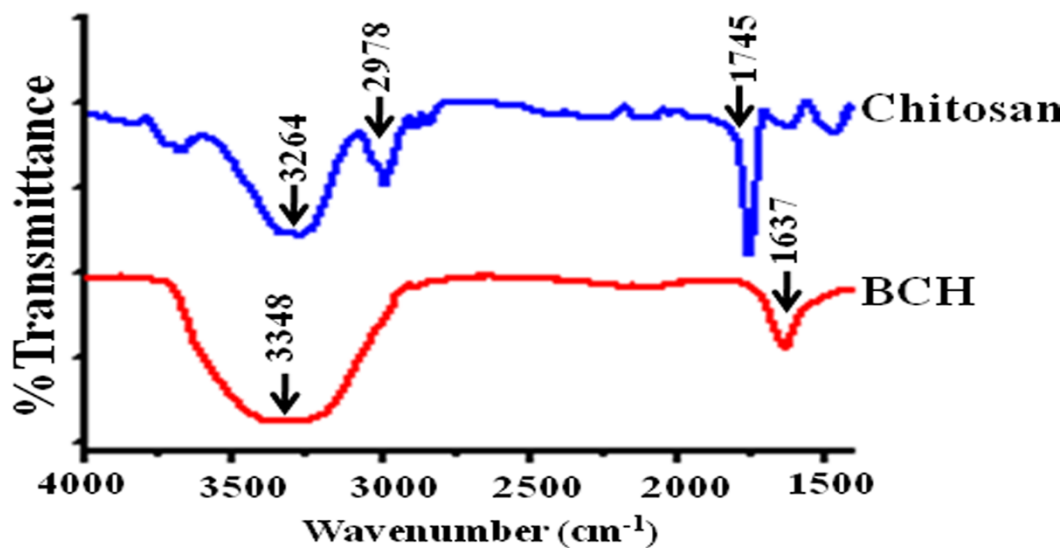


1 **ESI:**

2 FTIR analysis

3 The interaction pattern between the AgNPs and stabilizers were analyzed by FTIR
4 analysis. The FTIR spectra of chitosan and Chitosan-AgNP composite is shown in the figure
5 below. Three intense peaks in the spectra of chitosan sample were observed at 3264, 2978 and
6 1745 cm^{-1} , which are probably due to O-H (moisture), O-H (chitosan) and C-O stretching
7 respectively. The peak at 2978 cm^{-1} disappeared in the spectra of Chitosan-AgNP composite.
8 The disappearance of peak probably indicates the interaction between Chitosan and AgNPs.⁴²
9 Similar types of observations were obtained in other composites (BVA, BEG, BST) also.

10 **Figure:**



11

12 **Figure caption:**

13 IR spectra of Chitosan and BCH.

14

15