CHAPTER VI
CONCLUSIONS

The present work demonstrated the simple method to prepare magnetic chitosan nanomaterials through secondary forces and covalent bond. The simple mixing of magnetic nanoparticles and chitosan nanosphere in aqueous solution allows us to adjust charge on surface and particle size following the changes in pH. This work proved that in aqueous solution, the colloidal solutions stable at all pH ranges whereas in non-polar solvent (toluene), the hybrid shows disintegration of MAG and CSNS. (Chapter III). The work also continues to challenge in making stronger interaction between chitin/ chitosan materials and MAG through covalent bond. The work also proved that conditions that favour for colloidal stabilization is in polar solvent. The stability of the colloidal solution is achieved by hydrogen bond and polar-polar interaction (Chapter IV). Finally, MAG dispersing in porous structure chitosan was utilizing as bio-molecular adsorbing materials. The work shows that materials with high surface area show high DNA isolating efficiency (Chapter V).