

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

From the research about purple sweet potatoes eggshell biocomposite, it can be concluded that:

1. Eggshell powder increases the tensile strength of purple sweet potatoes starch at 1 % addition. The optimum tensile strength at 1% of variation is 12.80 MPa that is caused by distribution of eggshell powder uniformly and high fiber-matrix adhesion as showed in SEM micrograph
2. The minimum of tensile strength is 4.85 MPa at PSP ES 2 % that is caused by poor bonding between matrix and reinforcement, ununiform of eggshell powder and agglomeration of eggshell as a reinforcement as showed in SEM micrograph
3. Increasing of eggshell powder decrease the percentage of water absorption.

5.2 Recommendations

For a better result of this research, there are some parameter that must be a concern :

1. The size of eggshell must be reduce in order to make a better adhesion by matrix.
2. Increasing the eggshell percentage will make a better distribution of reinforcement in the matrix and the result will make the increasing of tensile strength and show the big difference of water absorption and FTIR results.