

CHAPTER V

CONCLUSION AND SUGGESTION

5.1. Conclusion

Based on the results of the research that has been carried out, several conclusions have been obtained, including:

1. The addition of gambier can increase the tensile strength and modulus elasticity values. The decrease in tensile strength and modulus of elasticity in films with a gambier concentration of 5% occurs due to agglomeration and accumulation of excess polyphenolic compounds, thereby reducing the tensile strength and modulus of elasticity. By adding glycerol to the biocomposite film will increase the elongation at break because of the plasticizing effect of glycerol reducing the stiffness and improving the free volume of the polymeric chains.
2. Adding glycerol to the biocomposite film is increasing the UV protective effect and makes the film darker than the film without glycerol.

5.2. Suggestion

The suggestion for further research is to carry out SEM (Scanning Electron Microscope) testing to determine the phenomena that occur in film surface fractures and add film testing using the FT-IR (Fourier Transform Infrared Spectroscopy) testing method to see the crystalline index on the film as supporting data for testing mechanical properties of the film.