BAB V
KESIMPULAN DAN SARAN

5.1. Kesimpulan

Berdasarkan dari hasil percobaan yang didapat dari penelitian yang telah dilakukan dapat disimpulkan bahwa:

1. Variasi konsentrasi gliserol dan volume HCl berpengaruh terhadap *tensile strength* bioplastik, dimana kenaikan konsentrasi gliserol akan menurunkan nilai *tensile strength* sedangkan kenaikan volume HCl akan menaikkan nilai *tensile strength*.
2. Variasi konsentrasi gliserol dan volume HCl berpengaruh terhadap nilai elongasi bioplastik, dimana kenaikan konsentrasi gliserol akan menaikkan nilai elongasi sedangkan kenaikan volume HCl akan menurunkan nilai elongasi.
3. Bioplastik yang dihasilkan dapat terdegradasi 6,04% dalam tanah dalam waktu 13 hari.
4. Variasi konsentrasi gliserol dan volume HCl berpengaruh terhadap nilai *water solubility* bioplastik, dimana kenaikan konsentrasi gliserol dan volume HCl akan menaikkan nilai *water solubility*.
5. Perubahan gugus fungsi yang terjadi dari pati menjadi bioplastik adalah adanya gugus O-H (*alcohol*) dan C=O (*acid halides*) akibat dari penggunaan gliserol dan HCl.
6. Kombinasi variasi formulasi HCl 4% dan Gliserol 20% pada bioplastik yang dihasilkan memenuhi standar *edible film* menurut *Japan Industrial Standard*.

6.2. Saran

Berdasarkan percobaan yang telah dilakukan, beberapa saran yang dapat diberikan untuk penelitian selanjutnya adalah sebagai berikut:

1. Perlu dilakukan penelitian ekstraksi pati lebih lanjut agar didapatkan yield yang lebih baik.
2. Perlu dilakukan penelitian mengenai zat aditif yang cocok ditambahkan agar bioplastik dapat dikomersilkan.

3. Perlu dilakukan kajian kelayakan ekonomi untuk melihat kelayakan kulit pisang kepok sebagai bahan baku bioplastik.

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