

BAB 5

KESIMPULAN DAN SARAN

5.1 Kesimpulan

Berdasarkan penelitian yang telah dilakukan, dapat disimpulkan bahwa:

1. Waktu reaksi 6 jam telah mendekati reaksi ketimbangan reaksi transesterifikasi.
2. Pada proses transesterifikasi, semakin tinggi temperatur dan rasio katalis maka nilai DS yang diperoleh semakin rendah.
3. Pada analisis FTIR diperoleh hasil kuantitatif terhadap gugus yang ada pada xanthan laurat. Dari analisis FTIR dapat memberikan data dukungan terhadap perolehan nilai DS xanthan laurat yang rendah.
4. Reaksi transesterifikasi tidak mengubah bentuk amorf dari xanthan gum setelah termodifikasi.
5. Morfologi dari xanthan laurat yang diperoleh masih serupa dengan xanthan gum murni karena perolehan DS yang terlalu rendah dan tidak tercapainya sifat hidrofobik yang mempengaruhi morfologi xanthan laurat.

5.2 Saran

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

1. Perlu percobaan variasi kadar air xanthan gum terhadap reaksi transesterifikasi untuk mengetahui kondisi optimum dalam perolehan nilai derajat substitusi.
2. Perlu percobaan variasi jumlah dan jenis reagen ester asam lemak untuk mengetahui pengaruh yang diberikan terhadap reaksi transesterifikasi.
3. Pada produk dapat dilakukan analisis terhadap sifat mekanik dan kekuatan termalnya setelah mengalami modifikasi.

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