

BAB 5

KESIMPULAN DAN SARAN

5.1. Kesimpulan

Berdasarkan penelitian yang telah dilakukan, maka didapat kesimpulan sebagai berikut

1. Kondisi optimum untuk mereaksikan benzaldehida dan asam malonat pada sintesis asam sinamat dengan reaksi Knoevenagel melalui metode iradiasi gelombang mikro yaitu dengan iradiasi selama 6 menit dengan daya 480 watt menghasilkan rata-rata persentase rendemen sebesar $76,58\% \pm 0,78\%$.
2. Kondisi optimum untuk mereaksikan 4-hidroksibenzaldehida dan asam malonat pada sintesis asam 4-hidroksisinamat dengan reaksi Knoevenagel melalui metode iradiasi gelombang mikro yaitu dengan iradiasi selama 16 menit dengan daya 480 watt menghasilkan rata-rata persentase rendemen sebesar $73,91\% \pm 0,70\%$.
3. Gugus hidroksil posisi *para* pada senyawa 4-hidroksibenzaldehida memperlambat terjadinya reaksi pada pembentukan asam 4-hidroksisinamat. Hal ini dibuktikan dengan lama waktu iradiasi gelombang mikro pada sintesis asam sinamat yaitu 6 menit, sedangkan pada asam 4-hidroksisinamat membutuhkan waktu 16 menit.

5.2. Saran

Dapat dilakukan penelitian lebih lanjut untuk uji toksisitas dan uji *in vivo* senyawa asam 4-hidroksisinamat sebagai terapi anti tumor atau anti kanker.

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