

## **BAB V**

### **KESIMPULAN DAN SARAN**

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#### V.1. Kesimpulan

Dari hasil percobaan ekstraksi minyak dari biji intaran dengan pelarut etanol pada kisaran suhu 30°C, 35°C, 40°C, 45°C, 50°C serta ukuran partikel  $^{-14}/_{+20}$  mesh,  $^{-20}/_{+25}$  mesh, dan  $^{-25}/_{+40}$  mesh dengan perbandingan massa biji intaran dengan volume pelarut (w/v) adalah 1:5, didapatkan bahwa:

1. Semakin kecil ukuran partikel biji intaran, semakin besar yield minyak intaran yang diperoleh.
2. Semakin tinggi suhu ekstraksi, semakin besar yield minyak intaran yang diperoleh.
3. Kondisi optimum proses ekstraksi minyak biji intaran dengan pelarut etanol adalah pada suhu 50°C dan ukuran partikel  $^{+25}/_{-40}$  mesh selama 200 menit yang menghasilkan *yield* sebesar 41,0823%.
4. Kinetika ekstraksi minyak biji intaran dapat dinyatakan dengan persamaan orde satu yaitu  $Y_A = Y_{Ai} [1 - \exp(-Kt)]$ .
5. Proses ekstraksi minyak biji intaran bersifat endotermis ( $\Delta H$  positif), irreversibel ( $\Delta S$  positif), dan spontan ( $\Delta G$  negatif).

6. Semakin tinggi suhu ekstraksi, mutu minyak intaran yang diperoleh semakin rendah yang ditunjukkan dengan meningkatnya bilangan asam, bilangan penyabunan, bilangan peroksida, dan menurunnya bilangan iodine.

## **V.2. Saran**

Saran yang dapat diberikan untuk percobaan selanjutnya adalah :

1. Memakai alat kontrol suhu agar saat proses ekstraksi berlangsung, suhu yang diinginkan dapat tercapai dan tetap konstan.
2. Minyak yang dihasilkan dari proses ekstraksi sebaiknya dimurnikan melalui proses filtrasi membran.

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