BAB V

KESIMPULAN DAN SARAN

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V.1. Kesimpulan

Dari hasil penelitian ekstraksi karotenoid dari limbah kulit udang dengan ukuran partikel 40/60, 60/80 dan 80/100 mesh menggunakan pelarut minyak kelapa sawit pada suhu 50, 60, 70, 80 dan 90 °C, didapat kesimpulan sebagai berikut :

1. a) Bertambah kecilnya ukuran partikel dapat mempercepat laju ekstraksi.
   b) Semakin tinggi suhu ekstraksi dalam kisaran 50 – 70 °C, *yield* karotenoid semakin meningkat, tetapi pada suhu > 70 °C yield yang dihasilkan menurun.
   c) Semakin lama proses ekstraksi berlangsung, yield yang dihasilkan semakin banyak.
2. Proses ekstraksi ini menghasilkan yield optimum pada ukuran partikel 80/100 mesh dengan suhu ekstraksi 70 °C selama 180 menit yaitu sebesar 131,743 µg/g.
3. a) Kinetika ekstraksi karotenoid dari kulit udang dapat dinyakatan dengan persamaan kinetika orde satu dan dua.
   b) Proses ekstraksi karotenoid dari kulit udang merupakan proses endotermis yang berlangsung spontan dan bersifat irreversibel.

V.1. Saran

Berdasarkan penelitian ekstraksi karotenoid dari limbah kulit udang dengan menggunakan pelarut minyak kelapa sawit, dapat dilakukan penelitian lebih lanjut, yaitu dilakukan analisa degradasi karotenoid untuk mencari model kinetika degradasinya.

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