

BAB 5

KESIMPULAN

5.1. Kesimpulan

Konsentrasi amilum kulit pisang berpengaruh dominan pada waktu hancur dan rasio absorpsi air dimana dengan peningkatan konsentrasi amilum maka mempercepat hancurnya tablet dan absorpsi air pada tablet akan meningkat. Konsentrasi crosprovidone berpengaruh dominan terhadap *Carr's index* granul ko-proses, *Hausner ratio* granul ko-proses dan waktu pembasahan dimana peningkatan konsentrasi crosprovidone akan meningkatkan nilai *Carr's index*, meningkatkan nilai *Hausner ratio* dan mempercepat waktu pembasahan. Interaksi konsentrasi amilum kulit pisang dan konsentrasi crosprovidone berpengaruh dominan terhadap peningkatan kekerasan tablet dan peningkatan kerapuhan tablet.

Hasil optimum yang diperoleh dengan program optimasi *Design Expert* yaitu formula dengan konsentrasi amilum kulit pisang 3,55% dan konsentrasi crosprovidone 5,06%, persentase ini sudah sesuai dengan hasil pengujian yang ada. Dari *Design Expert* juga didapatkan prediksi untuk respon *Carr's Index* 20,836 %, *Hausner ratio* 2,13, kerapuhan 0,34 %, kekerasan 2,1 Kp, waktu hancur 28,52 detik, waktu pembasahn 24,32 detik, dan rasio absopsi air 80,58 %. Respon yang menunjukkan adanya perbedaan bermakna antara hasil percobaan formula optimum dengan prediksi dari *Design Expert* yaitu *Carr's index*, kerpuhan, waktu hancur, waktu pembasahan dan ratio absorpsi air. Walaupun berbeda bermakna namun masih memenuhi persyaratan ODT.

Pengaruh konsentrasi formula optimum terhadap sifat fisik tablet ODT domperidone yang dihasilkan telah memenuhi persyaratan tablet ODT domperidone terkecuali pada uji kekerasan tablet ODT domperidone.

Dari hasil uji mutu fisik tablet ODT domperidone telah memenuhi persyaratan tablet ODT antara lain Carr's Index 21,04 %, *Hausner ratio* 1,26, kerapuhan 0,70 %, kekerasan 2,00 Kp, waktu hancur 21,40 detik, waktu pembasahan 14,47 detik, dan rasio absopsi air 85,15%.

5.2. Alur penelitian selanjutnya

1. Diharapkan ditemukan metode untuk memperoleh serbuk amilum kulit pisang yang lebih baik sehingga didapatkan rendemen amilum kulit pisang yang lebih tinggi serta keseluruhan uji serbuk amilum kulit pisang dapat terpenuhi.
2. Dapat dilakukan penelitian lebih lanjut mengenai formulasi ko-proses dengan menggunakan bahan aktif selain domperidone untuk membuktikan kesahihan dari hasil optimasi yang didapatkan.

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