BAB V
KESIMPULAN DAN SARAN

5.1 Kesimpulan

Dari penelitian ini, dapat disimpulkan bahwa:

1. Semakin tinggi temperatur dan tekanan yang digunakan pada ekstraksi superkritik CO_2 maka akan semakin besar perolehan minyak.
2. Perolehan minyak tertinggi pada metode ekstraksi superkritik sebesar 2,35% pada kondisi 300 bar, 65 ˚C
3. Perolehan minyak atsiri bawang merah dengan metode soxhlet sebesar 8,59%
4. Metode $ScCO_2$ lebih selektif mengikat komponen dibandingkan dengan metode soxhlet
5. Minyak atsiri bawang merah terbukti memiliki sifat antibakteri
6. Minyak atsiri bawang merah dari ekstraksi $ScCO_2$ lebih efektif dalam menghambat bakteri dibandingkan dengan minyak perolehan ekstraksi soxhlet.

5.2 Saran

Saran yang dapat diberikan untuk penelitian selanjutnya adalah:

1. Perlu dilakukan variasi laju alir CO_2 agar dapat melihat pengaruh laju alir terhadap perolehan minyak
2. Untuk penelitian selanjutnya, dapat dicoba dengan penambahan modifier seperti etanol atau air untuk mengetahui pengaruhnya terhadap solubilitas dan perolehan minyak dari $scCO_2$
3. Sebaiknya dilakukan percobaan variasi terhadap waktu statik dan dinamik untuk mengetahui proses mana yang paling berpengaruh dalam meningkatkan yield minyak.
4. Dapat dilakukan modifikasi pada bagian separator menjadi beberapa fraksi untuk menurunkan tekanan CO_2 secara bertahap untuk mengurangi risiko CO_2 berubah menjadi *dry ice* dan menyumbat pipa.
5. Untuk penelitian selanjutnya, dapat dicoba dengan langsung memasukkan bawang merah ke dalam ekstraktor tanpa perlu pengeringan untuk mengetahui pengaruh kadar air sebagai modifier dan pengaruhnya dalam yield minyak.

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