

BAB V

KESIMPULAN DAN SARAN

5.1 Kesimpulan

Kesimpulan yang diperoleh dari penelitian ini adalah:

1. Perbedaan jenis pelarut mempengaruhi % *removal* kafein, dimana pada penelitian ini jenis pelarut air menghasilkan *removal* kafein terbesar yakni 24,20 % dibandingkan dengan etanol sebesar 13,86 %.
2. Tekanan operasi proses dekafeinasi kopi menggunakan fluida superkritik CO₂ berpengaruh terhadap % *removal* kafein yang dihasilkan. Semakin besar tekanan operasi, maka semakin kecil % *removal* kafein yang diperoleh, dimana pada penelitian ini *removal* kafein terbesar diperoleh saat variasi tekanan 15 MPa yaitu sebesar 15,99 %.
3. Peningkatan temperatur operasi pada proses dekafeinasi kopi menggunakan fluida superkritik CO₂ berpengaruh terhadap % *removal* kafein yang dihasilkan. Semakin meningkat temperatur operasi menghasilkan % *removal* kafein yang semakin kecil. Pada penelitian ini, variasi temperatur paling kecil yakni 50 °C menghasilkan *removal* kafein terbesar yaitu 14,38 %.

5.2 Saran

Saran yang dapat diberikan untuk penelitian selanjutnya adalah:

1. Perlu dilakukan penelitian lebih lanjut dengan variasi tekanan dan temperatur yang lebih rendah mendekati tekanan kritik dari CO₂. Variasi temperatur dapat dilakukan pada tekanan di atas 10 MPa, agar pengaruh temperatur masih cukup signifikan.
2. Perlu dilakukan variasi waktu ekstraksi yang lebih lama untuk melihat seberapa signifikan waktu ekstraksi pada besar % *removal* kafein yang diperoleh.
3. Perlu dilakukan variasi laju alir CO₂ yang lebih tinggi, untuk melihat pengaruhnya terhadap % *removal* kafein yang diperoleh. Peningkatan laju alir memungkinkan semakin cepat kafein yang diperoleh, sehingga % *removal* kafein yang dihasilkan lebih besar.

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