BAB V

KESIMPULAN DAN SARAN

5.1 Kesimpulan

1. Hasil percobaan pendahuluan menunjukkan pembuatan *refined* kappa karaginan akan menghasilkan rendemen tertinggi pada temperatur ekstraksi 90°C.
2. Semakin tinggi konsentrasi larutan KOH dan waktu ekstraksi akan meningkatkan perolehan rendemen *refined* kappa karaginan. Rendemen yang dihasilkan berada pada rentang 25,646-33,037% yang telah memenuhi standar FAO (minimal 25%).
3. Semakin tinggi konsentrasi larutan KOH untuk ekstraksi dan waktu ekstraksi akan menurunkan kadar sulfat dalam *refined* kappa karaginan. Kadar sulfat yang didapatkan berada pada rentang 6-15%. Nilai tersebut lebih kecil dibandingkan standar FAO yaitu 15-40%.
4. Sifat fungsional karaginan yaitu viskositas dan kekuatan gel dipengaruhi oleh kadar sulfat. Semakin tinggi kadar sulfat akan didapatkan sifat fungsional viskositas yang semakin tinggi namun menghasilkan karaginan dengan kekuatan gel yang rendah.
5. Nilai viskositas yang didapatkan pada penelitian ini berada pada rentang 16-79 cP yang memenuhi standar FAO (minimal 5 cP).
6. Nilai kekuatan gel yang didapatkan pada penelitian ini berada pada rentang 1415,2-2476,81 gram/cm^2. Kekuatan gel tersebut telah memenuhi standar untuk karaginan yaitu 900-2000 gram/cm^2.
7. Kadar abu yang didapatkan pada percobaan ini memiliki rentang 40-50% yang melebihi batas standar FAO yaitu 15-40%.
8. Kadar abu tidak larut asam yang didapatkan pada percobaan ini memiliki rentang 0,614-1,229%% yang melebihi batas standar FAO yaitu maksimal 1%.

5.2 Saran

1. Disarankan proses presipitasi untuk pembentukan gel dilakukan dengan menggunakan etanol. Hal tersebut dapat mengurangi kandungan mineral yang menempel pada karaginan akibat penggunaan KCl untuk presipitasi.

2. Disarankan proses pencucian karaginan dilakukan hingga larutan memiliki pH netral untuk memastikan tidak ada ion kalium yang tersisa pada karaginan.

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